

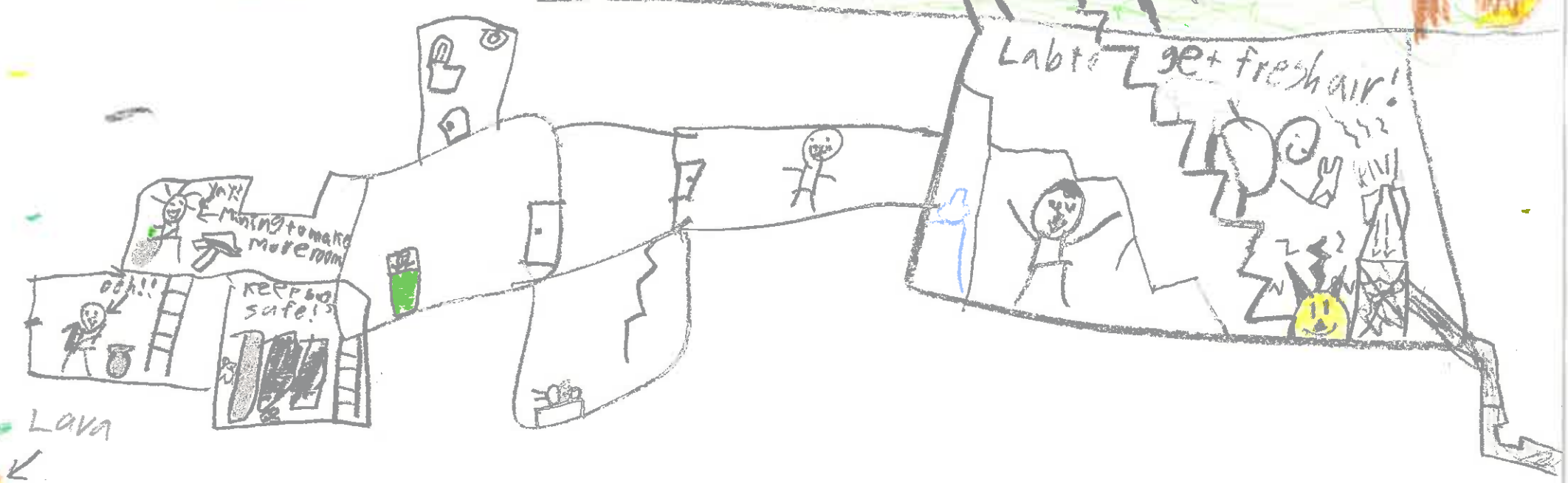
WOLF 10 WOLFS  
WOLF 10 WOLFS  
PLAY I SPY!

Look for Pickachu  
I am a fox  
I could be  
everyone who  
I am a

Local renewable  
fuels ☺



Emeralds  
Lizards  
Gold  
Obsidian  
Water  
Lava  
Obsidian

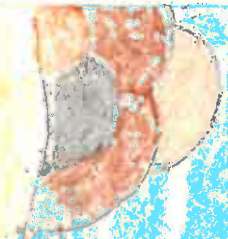
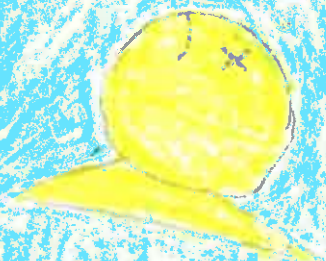


By Mulsuki and Nasser



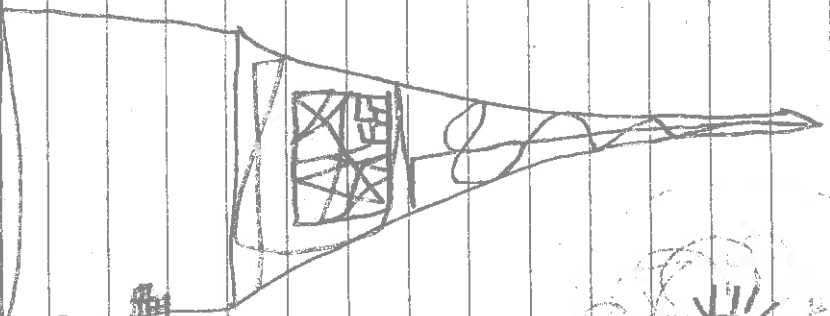
Tracking hurts sea life.  
Tracking is harmful for sea life.

By Dominika



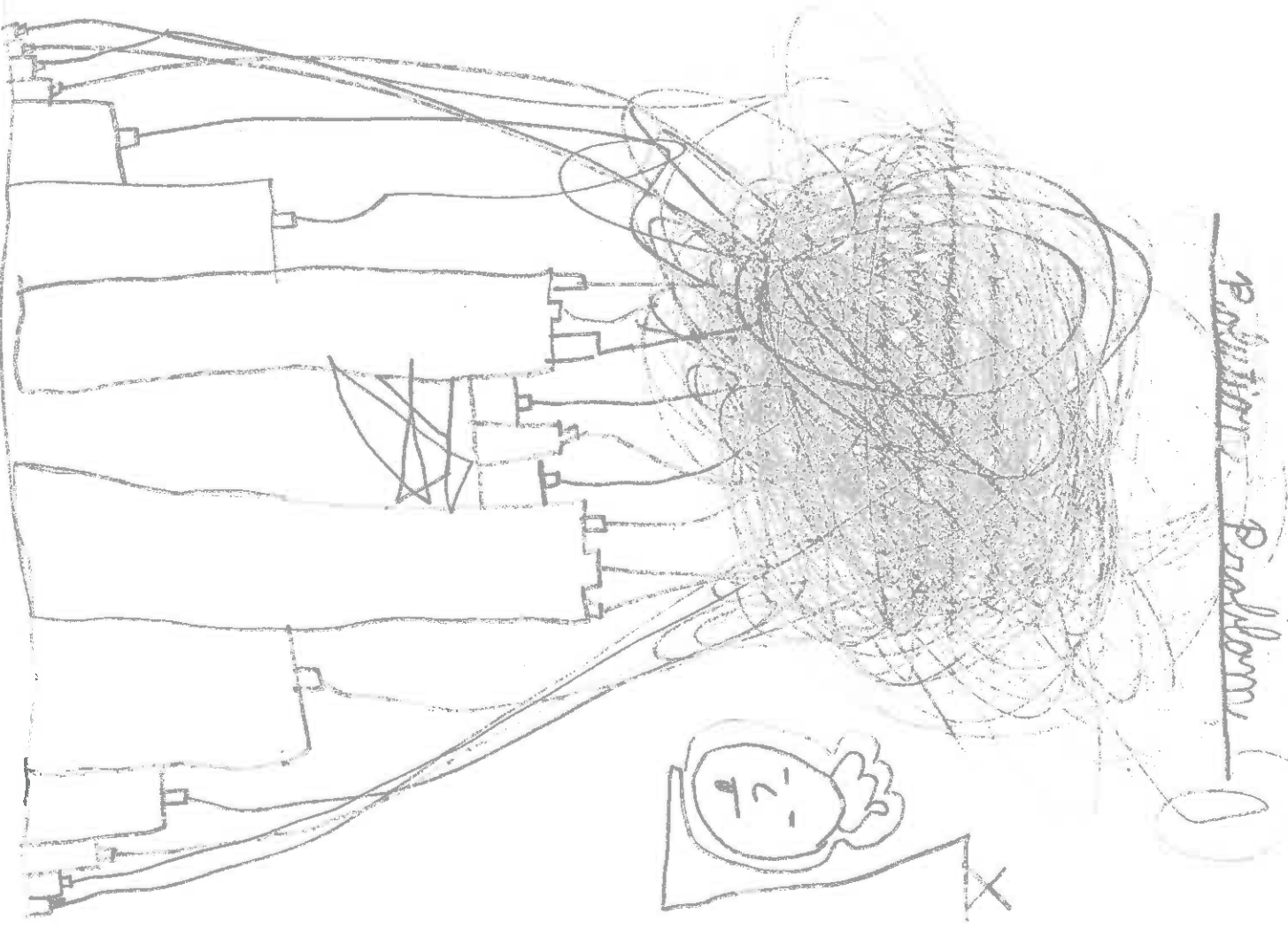
Better energy of Ben Brilant

less of stand



By Carter Thomas

# Political Problems



By Carter Thomas



**From:** [Adrienne Smith](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Future Energy Plan  
**Date:** Wednesday, November 21, 2018 1:31:45 PM

---

To the Regulatory Authority of Bermuda,

I am writing to voice my support for Bermuda's future energy strategy to be that articulated in the Bermuda Better Energy Plan. My main reasons for supporting this plan are these:

1. Belco is a for profit business and thus the board must pursue the most profitable future for the company. Investing in renewable energy will compromise this objective. and you need to look no further than their current business strategy to see evidence of this. The commercial electricity rates get cheaper as you spend more, the opposite of homeowners. This makes solar utterly unfeasible from a financial perspective to commercial building owners.
2. Financial Independence. We need to uncouple our own economic well being from the world market for fossil fuels. Renewables have a predictable maintenance and installation cost.
3. The environment.
4. Status among other countries. Accepting Belco's plan moves us in the opposite direction to the rest of the world. Following the path articulated in the Bermuda Better Energy Plan provides us with an opportunity to be a leader in the planet's future. The Belco Plan could compromise our business and tourism sectors.
5. Seriously reducing our dependence on fossil fuels is achievable. We are a small country. Given the commitment of Government and our people, we can do this.

Sincerely,

Adrienne Lowe (nee Smith)  
Warwick

Mr A S Brooks  
'SOFTWINDS'  
4 Shaw Wood Crescent  
Pembroke  
HM 01  
Tel: 296 0943  
*E-mail: apasbrooks@northrock.bm*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

21<sup>st</sup> November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- As one of the first private dwellings to have solar panels fitted, I have learned only too well of the diverse benefits of this method of energy generation. In a country such as ours, the environmental conditions dictate that power generation by renewable means is a 'no-brainer' for both domestic and commercial applications. We would be foolish to ignore such a plan as proposed by BE Solar.

I am sure that you have been inundated with responses such as this, which will be a true measure of the feeling in the country. In this context, thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

*Alan Brooks*

# C. F. A. COOPER BA. JD. JP.

---

Suite # 248, 48 Par-la-Ville Rd.

Hamilton, HM 11, Bermuda

November 14, 2018

Monique Lister

Regulatory Authority

1<sup>st</sup> Floor, Craig Appin House

8 Wesley Street, Hamilton, Bermuda

Re: Response to Consultation Document: Comments on IRP Bulk Generation Proposals

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP BULK Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- 1) Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- 2) Uses technology that is in commercial use in other jurisdictions.
- 3) Has been developed using detailed and transparent assumptions and methodologies.
- 4) Let me say that I am a shareholder of BELCO but believe that their proposal has not been made on an objective basis with the best interests of



Bermuda at heart. I understand the one or more Directors plus a controlling shareholder are directly involved in the supply of LNG in the United States and it is this economic interest and not what is in the best interest of Bermuda that is driving the BELCO initiative.

- 5) I have installed a photovoltaic system at my house which provides a very successful supply of electricity. In fact in the summer I return into the grid more than I consume for which I was initially receiving a credit from BELCO. Since the rates have been unfairly changed I now have to pay a monthly charge although I am a net contributor to the grid.

Thank you for your time in reviewing my response. I look forward to learning of the final outcome of the IRP consultation process. If you wish to contact me my telephone is 505-3164 and email address is cfacooper@hotmail.com.

Yours Sincerely,

A handwritten signature in blue ink, appearing to read 'C.F. A. Cooper', with a stylized, cursive script.

C.F. A. Cooper

**From:** [Alex Smith](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Future Energy  
**Date:** Wednesday, November 21, 2018 8:36:30 AM

---

To Whom it may concern,

I am writing to voice my support for striking down Belco's call for a natural gas conversion and to instead pursue a course towards renewable energy. The reasons for this are countless but we can just highlight a few:

Belco is inherently biased. They are a for profit business and thus the board is actually duty bound to put its shareholders first and ensure the most profitable future for the company. Renewable energy will compromise this objective and you need not even look to their future energy plan to see evidence of this. The commercial electricity rates get cheaper as you spend more, the opposite of homeowners. This encourages excess usage and make solar utterly unfeasible from a financial perspective to building owners.

Financial Independence. We need to uncouple our own economic well being from the world market for fossil fuels. Renewables have a very predictable maintenance and installation cost, we simply don't need to place ourselves at the mercy of fossil fuel markets.

The environment. This is fairly self explanatory, but there are less obvious upsides here too. Belco, the facility, is huge! With fewer generators, at least half of that land area could be used for better purposes. A Park, housing, fields for the surrounding schools, just to name a few. And those smoke stacks are a blight to our skyline.

Status among other countries. Not only would accepting Belco's plan move us in the opposite direction of the rest of the world, it gives up an opportunity to be a leader in the planets future. This could easily promote our business and tourism sectors. Bermuda is unique in that we are probably the only true "first world" country that has only 55,000 residents and 20 square miles. The scope of converting even a small european country to entirely renewable is almost unfathomably huge. But for us, its realistic. We very easily could convert our entire nation in a way that no one else could and be a true example of a sustainable future to the rest of the world. It is not an unrealistic goal to replace every car on the island with electric, put solar on every roof, and convert our nations grid within the lifetime of even our older citizens.

We need to take door number 2.

sincerely,  
Alex Smith

**From:** [Graham-Welton, Alice](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Thursday, November 22, 2018 5:14:23 AM

---

To whom it may concern,

I strongly support the Bermuda Better Energy Plan. I am strongly opposed to the almost exclusive reliance on fossil fuels by Belco for a prolonged period of time. It will destroy my beautiful, tiny home. I therefore support the Bermuda Better Energy Plan use of 64 per cent clean renewables of wind and solar power by the year 2038.

Many Thanks,

--

**Alice Graham-Welton**  
Wake Forest University Class of 2020  
[grahag16@wfu.edu](mailto:grahag16@wfu.edu)  
917-946-4065  
[LinkedIn](#)



Amanda Stewart  
1 Tamarisk Hill  
Smiths  
FLo3  
Bermuda  
(441) 278-1300  
Amandabda78@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

November 23, 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- We have discussed this matter as a family, including our very concerned 7 year-old son, who has very strong views on this matter. This is his future we are talking about and he knows it. He believes we need to focus on renewable energy technologies for a cleaner future. He also says that we need to educate everyone in this matter.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Amanda Stewart', with a long horizontal flourish extending to the right.

Amanda Stewart  
(on behalf of the Stewart family)

Andrew Almeida, CPA  
14 Hillview Road  
Warwick  
WKO5  
Bermuda  
+1 441 242 7303  
Asalmeida92@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

22 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms. Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Allows Bermuda to reduce reliance on fossil fuels which is susceptible to price volatility.
- Aligns us with the Caribbean region and worldwide movement to establish renewable energy sources and creating a resilient energy grid.
- Is aligned with the vision of the government(who represents the population of Bermuda) to pursue renewable energy sources as evidenced by their MOU signing with the Rocky Mountains Institute.
- Will allow Bermuda to reduce our carbon footprint which is an important role in reducing the effects of Global Warming, which is becoming ever so evident.
- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses mature and proven technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies by industry experts and provides the optimal blend of energy sources for Bermuda's future.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

*Andrew Almeida*

Andrew Almeida, CPA

DR ANNABEL CARTER  
AVALON, 3 MILLSHARES RD  
PEMBROKE  
HM05  
BERMUDA  
*acarter@logic.bm*  
296 7788

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

15 November 2018

Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals


Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *Is the right thing to do. Fossil fuels are NOT the future, sustainable energy is. We need to give our children a future. DO THE RIGHT THING.*
- 
- Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



DR ANNABEL CARTER



**From:** [anthony gorham](#)  
**To:** [rab.relay@gmail.com](mailto:rab.relay@gmail.com)  
**Subject:** General Email from RAB Website "Public plans for energy in Bermuda"  
**Date:** Tuesday, November 20, 2018 4:53:40 PM

---

From: anthony gorham

Email: [agorham220@gmail.com](mailto:agorham220@gmail.com)  
Phone No.: 292-5616

Subject: Public plans for energy in Bermuda

Message: I like the Bermuda Better Energy Plan more than the one made by BELCO. I hope you will support my view.  
with thanks.  
best,

--

This e-mail was sent from the General Information contact form on the Regulatory Authority of Bermuda Website

**From:** [Arlene Simons](#)  
**To:** [Electricity](#)  
**Subject:** IRP Response  
**Date:** Friday, November 23, 2018 11:20:57 PM

---

The IRP proposed by BELCO will guarantee Bermuda's power generation will continue to be dependent of fossil fuels, exposing Bermuda to higher energy costs due to the volatility of the oil and gas markets. Obviously, renewable energy based power generation (solar and wind) is a far better way to go in the long run from both an environmental and overall cost point of view. The Bermuda Government itself, through its Dept of Energy, has been promoting renewable energy technologies, so I do not understand why we are still even considering fossil fuel based power generation for Bermuda.

Regards  
Arlene Simons

**From:** [Ausenda Roberto L](#)  
**To:** [Electricity](#)  
**Subject:** The Bermuda Better Energy Plan  
**Date:** Sunday, November 25, 2018 5:21:03 PM

---

Dear RAB,

I am a Bermudian student working in Canterbury England.

England is by no means a country that is leading the renewable industry, but every day I see examples of progress. Whether this be plans to construct offshore wind-turbines or planned closures of coal factories. An effort is being made.

Barbados, a country that has a similar GDP to Bermuda with a population four times the size 'hopes to be 100% reliant on renewable energy by 2030'. This shows that it is entirely possible to aspire to an energy future that will allow for the reduction of climate change. It goes without saying that climate change and the associated rise in sea levels is a huge threat to Bermuda, and as a country that will be affected dramatically and severely, we should be leading the way to a cleaner, cooler future.

Thank you for Better energy plan which is taking steps in the right direction.

Sincerely,

Roberto

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**From:** [Barbara Prime](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Tuesday, November 20, 2018 5:57:31 PM

---

I am a resident of Bermuda for the past 20 years, and am very worried about global warming and future energy needs. I am very pleased that Bermuda has put forth a sensible future energy plan, and wish to express my full support and approval of the Bermuda Better Energy Plan ! I wish I had a more important voice, but this member of the public is excited and pleased with the far sighted and innovated Plan. I hope we can one day even stop importing polluting oil. Thank you, Mrs Barbara Prime

Sent from my iPad

**From:** [Betty Hutchings](#)  
**To:** [Electricity](#)  
**Subject:** future of electricty  
**Date:** Tuesday, November 20, 2018 2:38:11 PM

---

I just wish to say that Bermuda would be crazy not to seriously consider using wind towers and not using fossil fuels. Now is the time to start the ball rolling. Good luck in your endeavour.

Am glad you have an experienced company working on it. Good luck. Betty Hutchings

**From:** [brcorday@gmail.com](mailto:brcorday@gmail.com)  
**To:** [Electricity](#)  
**Cc:** [Ishrat Yakub](#)  
**Subject:** Future Energy  
**Date:** Wednesday, November 21, 2018 8:28:28 PM

---

Good Day RAB,

Writing in support of the Renewable Energy Plans. Please choose the Better one :)

Brett and Ish

Send from my vivo smart phone



Cameron Snaith

23A Scott's Hill Road  
Somerset, MA05  
234-2043  
cam@bleeker.co

November 23, 2018

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals

Dear Ms Lister,

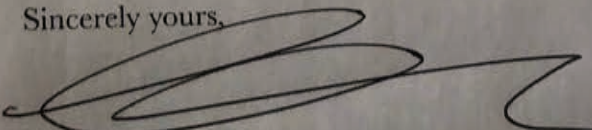
I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

**I support the Bermuda Better Energy Plan submitted by BE Solar**, as this plan:

- Is the most consistent with the purposes of the Electricity Act and the ministerial direction for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilizing energy costs through clean, renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Is the right thing to do. Fossil fuels are **not** the future, sustainable energy is. We need to give our children and our children's children a future.

Thank you for your time in reviewing my response. I look forward to learning of the final outcome of the IRP consultation process.

Sincerely yours,



Cameron Snaith

**From:** [Caroline Foulger](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 5:33:01 AM

---

Dear RAB

Excuse my brevity on an iPhone as I am currently off the island.

I am writing to express my support for the plan referenced above. I believe Bermuda can and must move to a greater use of renewable energy and also find ways to retain more of the economics of this essential utility service in Bermuda.

Thanks for your consideration

Caroline Foulger

Sent from my iPhone

**From:** [Catherine Stewart](#)  
**To:** [Electricity](#)  
**Subject:** Support of the Bermuda Better Energy plan  
**Date:** Wednesday, November 21, 2018 9:02:25 AM

---

Good Morning,

My name is Catherine Stewart, and I am writing to you in support of the Bermuda Better Energy plan.

As a current resident and Bermudian, I am concerned, and at times flabbergasted, at my electricity bill and Bermuda's lack of alternate energy sources.

I am very proud of my Island and long to see it move forward with the rest of the world and rely less on fossil fuels.

I also lived in the USA and seen huge fossil fuel plants and fracking facilities (mining for natural gas) pollute and scare the earth. Please don't let Bermuda support these invasive and ultimately finite resources. Let's be part of the solution not the problem.

With infinite sunshine and ocean breezes we have the ultimate energy resources at our fingertips.

For these reasons and many more, I support the Bermuda Better Energy Plan to become less reliant on fossil fuels, and reject the Belco Plan. I hope the RAB will hear Bermuda.

Sincerely,  
Catherine Stewart

Sent from my iPhone

**From:** [Sean O'Connell](#)  
**To:** [Electricity](#)  
**Subject:** Please don't do it.  
**Date:** Friday, November 23, 2018 9:27:21 AM

---

Good day,

We, both local resident Bermudians, strongly support the **BERMUDA BETTER ENERGY PLAN** and implore you to reject the Belco Plan in order to secure our future based on clean energy rather than fossil fuels.

Yours sincerely,  
3551 25 Mt. Wyndham Drive, Hamilton CR04

Dr. Sean and Mrs. Cecilia O'Connell Tel: 293-

**From:** [Charlene Grant](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 9:17:03 AM  
**Attachments:** [image001.png](#)

---

Good Day,

I would like to express my interest in the Bermuda Better Energy Plan. We should look towards more sustainable ways to contribute to the environment and our well being. It is well over due.

In transitioning into wind and solar power, not only costs for consumers will decrease, it can create more jobs with installation and maintenance, it will create an environmentally friendly Bermuda. The benefits are much greater than fossil-fuels that produce carbon dioxide which if high levels are produced are bad for our health and environment. We can achieve benefits such as non-polluting electricity, free and renewable resources, energy conservation, and low carbon power.

If we can move forward, reducing our carbon footprint, electricity costs, and increase our health, I am in support of the Bermuda Better Energy Plan.

Kind Regards,

**Charlene Grant**  
Technical Officer | Bermuda Shipping and Maritime Authority  
4<sup>th</sup> Floor Mintflower Place, 8 Par-La-Ville Road, Hamilton HM 08, Bermuda  
T +1 441-495-7260 | F +1 441-295-3718 |  
E [cgrant@bermudashipping.bm](mailto:cgrant@bermudashipping.bm) | [www.bermudashipping.bm](http://www.bermudashipping.bm)

**CHARLES K DUNSTAN**

*'FLEETWAY'  
26 JENNINGS BAY RD  
SOUTHAMPTON,  
BERMUDA SB04*

[CDUNSTAN@KAISSA.BM](mailto:CDUNSTAN@KAISSA.BM)  
*441-705-3535*

22 November 2018

Monique Lister  
Regulatory Authority  
1<sup>st</sup> Floor, Craig Appin House  
8 Wesley Street  
Hamilton

**RE: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,  
Please consider this my response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan appears to be the most consistent with the objectives laid out in the 2016 Electricity Act.

In addition:

1. this plan is more consistent with ministerial directions for the least-cost provision of reliable electricity
2. this plan provides clear and compelling evidence that renewable energy can deliver a substantial reduction in carbon emissions, as well as stabilizing energy costs.
3. This plan uses technology that has proven to be reliable over a significant period of time in commercial use in other jurisdictions
4. This plan has been developed using detailed, transparent and conservative assumptions and methodologies
5. This plan includes an initiative to reduce electricity use by 30%
6. This plan proposed ending discriminatory charges for solar systems connected to the grid
7. This plan recognizes that the cost of wind and solar is forecast to reduce over the course of the target period

Sincerely yours,



Charles K Dunstan



**From:** [Cherylle Swan-Simons](#)  
**To:** [Electricity](#)  
**Subject:** Better Bermuda Energy Plan  
**Date:** Thursday, November 22, 2018 5:03:27 PM

---

Good Day Regulatory Commissioners,

I support the **Bermuda Better Energy Plan** over the Belco Plan. Relying on fossil fuels (as per the Belco Plan), where the costs are high and volatile, and the result is pollution, is not the way forward for Bermuda and future generations.

We need to explore new/renewable energy sources, which are not only good for the environment, but will be cost efficient for the consumer. Bermuda deserves this.

On behalf of myself and my family we ask that the Commission explore the recommendations made in the Bermuda Better Energy Plan.

Regards,  
Cherylle Swan-Simons

*Chris Phillips*  
7 Clay Court – Main  
Bailey's Bay, Hamilton Parish  
CR03  
Bermuda  
441-705-8950  
*Chris.mike@me.com*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*23 November 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



*Christopher M. Phillips*

**From:** [cindy.smith](#)  
**To:** [Electricity](#)  
**Subject:** Better energy plan for Bermuda  
**Date:** Tuesday, November 20, 2018 4:49:05 PM

---

I am interested in having a better energy plan for Bermuda and for generations to come . No more monopoly.

Cindy

**From:** [Clyde Bassett](#)  
**To:** [Electricity](#)  
**Subject:** BERMUDA'S FUTURE ENERGY POLICIES  
**Date:** Sunday, November 25, 2018 3:06:22 PM

---

A quote from the recent Bermuda government Throne Speech(Nov/18)

"High energy costs are among the first factors cited by investors and developers as a barrier to doing business in Bermuda.

High energy costs have hurt working-class Bermudians forcing them to spend large amounts of their hard-earned money on an unavoidable expense, money that would otherwise be saved and pumped back into the economy. In fact Bermudians pay the highest energy rates of any comparable jurisdiction".

Having said that, and with the stated goal of the Bermuda government's quest to create an infrastructure and user-friendly business environment to encourage fintech and companies utilizing block chain application technologies, it would be incompatible to pursue "status quo" proposals for Bermuda's future energy needs.

The Bermuda Better Energy Plan clearly draws this decided line of demarcation between the 'old' vs the 'new', and contrasts with Belco's proposed energy plan.

Compare & Contrast:

Belco Plan - M\$120 in new capital investment. Converting liquefied natural gas to the end product of electricity, utilizing 85%/95% fossil fuel.

Bermuda Better Energy Plan - projecting use of 64% in clean renewables of wind and solar, utilizing fossil fuels only in a limited transitional part of their plan. Thus reducing fossil-fuel dependency to about 36% by 2038.

The worldwide trend in total amount in power generation in 2017 was

B\$265 - in renewables vs

B\$103 - in fossil fuels

(Source - Renewable Energy Policy Network think-tank)

The choice is quite clear for Bermuda to maintain its position as a 'gold standard' preferred destination.

To do otherwise, is to reduce Bermuda to the dustbin as innovators. In queue, even behind regional competitors such as the Cayman Islands and Barbados.

At what price are we willing to pay?

Making the sound, innovative and commercially viable choices today will have a profound impact on Bermuda's energy costs in the foreseeable future to not only new investors and developers, but also to the everyday Bermuda consumer as well.

With Belco's plan we(all of us) will continue to pay more now, and for at least the next 20

years. Placing us at an untenable competitive disadvantage.

Clyde W. Bassett  
Sandys  
Bermuda

**From:** [Colleen Nelson](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 9:26:49 PM

---

Good day,

I support the Bermuda Better Energy Plan,

Sincerely,

Colleen Nelson

Sent from my iPhone



Connor Burns  
9 Kent Avenue (Lower Apt)  
Devonshire, DV07, Bermuda  
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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

18 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support research into an alternate plan, such as the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Provides a means of allowing a competing entity to have a real say in the future of Bermuda's energy, breaking into what is otherwise a slow-moving natural monopoly. This is not to say the new entity and BELCO wouldn't work together, but it provides another group and another voice in the future of our country.
- We are at least 15 years behind any other comparable jurisdiction with respect to diversifying our energy sources. Going with BELCO's plan will lock us into paying off enormous assets owned by foreign entities (LNG infrastructure in particular) for decades to come – that leaves us no wiggle room and, given the direction the rest of the world is taking, put us in a position that is 30-45 years behind the rest of the world by the time it's done.
- We should be looking at plan which can improve recirculation of Bermuda dollars in our economy, not increasing the likelihood that we send more overseas for volatile foreign fossil fuels and unnecessary assets.
- BELCO should be held more accountable to proper planning of asset retirement, replacement, future planning and use of 'natural monopoly'-sourced funds (i.e. funding private industry ventures, share buybacks and more when the public has no choice who to buy electricity from). Their plan only guarantees them more of the same favourable regulations in the future.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



Connor Burns

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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

20 November 2019

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *Having invested in unique, sustainable and renewable resources and research with sweat-equity as well as finances; I want this to be a viable industry and available to all Bermudians. I wish to have our next generations benefit from a portfolio-like way of creating a better, smaller carbon footprint approach to living on our beautiful island.*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



Corey Masters-Brown

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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

19 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I wholeheartedly support the Bermuda Better Energy Plan submitted by BE Solar and I also support the further expansion and study of ongoing Alternative Energy supply for Bermuda over Liquefied Natural Gas (LNG) supply given the research and information below.

I hope you will at the very least consider the advancement of our own Alternative Natural Energy Supply found right at our door step and how that will provide a safety net for our local jobs sector, our energy sustainability, our local and global environmental impact and our global image as a progressive and capable jurisdiction that values the environment and its people.

*"To truly transform our economy, protect our security, and save our planet from the ravages of climate change, we need to ultimately make clean, renewable energy the profitable kind of energy."*

Barack Obama

*"Unless the sun dies, winds stop, plants die and rivers stop running, there will always be green energy to be had. Some of these energy sources are completely free and we have them no matter what. Why not take advantage of them?"*

Edgar Cervantes

*"Once the renewable infrastructure is built, the fuel is free forever. Unlike carbon-based fuels, the wind and the sun and the earth itself provide fuel that is free, in amounts that are effectively limitless."*

Al Gore

*"Any Energy Plan in the modern world today that doesn't focus its thrust on Renewable Energy Sources as its primary pillar, isn't a Plan for the Public, it's a Plan for Profits."*

Let me be the first to confess that I am in no way an electrical energy expert, but whatever I may lack in electrical energy knowledge I make up for in the desire to provide personal energy that engages people to do the right thing, and the right thing with regard to this issue in my opinion is clearly at the very least, the study and further development of broader long term and safe alternative sustainable energy supply for our Island. Which the Alternate Energy Plan proposed by BE Solar and Etude provides.

As with many people who may not be fully up to speed on all of the intricacies with regard to the complexity of our current local energy grid and supply, many of us rely on our common sense and credible data to reach a consensus between right and wrong, or good and bad. As such the below information is a collection of both, in the hopes that we make the right choices for our long term success and sustainability for future generations to come.

Let's not simply pursue a model that relies solely on following the leaders of global conglomerate profit based fuel plans because it's easier, but instead let's be leaders ourselves with our own energy future.

### **Environment:**

On review of the various energy submissions put to the Regulatory Authority there are many things that stand out right away as being an obvious potential threat to our small island nation, as well as the world when it comes to LNG & Fossil Fuel use. Most of which are the local and global impacts that LNG has on the environment by way of its extraction via fracking and then its highly volatile nature during collection, transport and storage.

When reviewing the independent international studies for comparison it's clear that the risks are credible.

*"Pound for pound, EPA reports, the comparative impact of methane on climate change is more than 25 times greater than CO2 over a 100-year period and about 84 times more potent than CO2 over a 20-year period....."*

<https://www.yaleclimateconnections.org/2016/07/pros-and-cons-the-promise-and-pitfalls-of-natural-gas/>

*"A no-brainer here: Natural gas, a fossil fuel, is not a renewable energy resource. In a 2014 news article in The New York Times, environmental and climate change activist Bill McKibben argued that the nation should stop relying on natural gas as a supplement to renewable energy. "It's time to stop searching for a bridge and simply take the leap," he said."* <https://www.yaleclimateconnections.org/2016/07/pros-and-cons-the-promise-and-pitfalls-of-natural-gas/>

*"Some natural gas leaks into the atmosphere from oil and natural gas wells, storage tanks, pipelines, and processing plants. These leaks were the source of about 32% of total U.S. methane emissions and about 4% of total U.S. greenhouse gas emissions in 20151."*

[https://www.eia.gov/kids/energy.php?page=natural\\_gas\\_home-basics](https://www.eia.gov/kids/energy.php?page=natural_gas_home-basics)

*"Some areas where drilling occurs have experienced increases in concentrations of hazardous air pollutants and two of the six "criteria pollutants" — particulate matter and ozone plus its precursors — regulated by the EPA because of their harmful effects on health and the environment"* <https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/environmental-impacts-of-natural-gas#.W-3ERpiWwdU>

*"Land use and wildlife: A study of hydraulic fracturing impacts in Michigan found potential environmental impacts to be "significant" and include increased erosion and sedimentation, increased risk of aquatic contamination from chemical spills or equipment runoff, habitat*

fragmentation, and reduction of surface waters as a result of the lowering of groundwater levels” <https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/environmental-impacts-of-natural-gas#.W-3ERpiWwdU>

Do we risk the lives and health of others to service our needs?

### **Sustainability:**

The long term objectives of any small island nation that relies on limited resources to attract overseas dollars, as well as its need to ensure its people are cared for and protected must be the sustainability of its natural, social and economic environments.

Although LNG will likely add some jobs to the market during infrastructure build, it will also effectively be reliant on overseas supply and demand for its purchase and maintenance with a very volatile and unpredictable price point to the local consumer.

It will also require extreme risks to its supply and storage while in transit to, and storage within the island. An island that already carries an extremely sensitive natural environment under constant threat from global and local impacts, and one in which is in need of continual protection.

*“Natural gas is just another dirty fossil fuel on the road to disastrous climate change. Natural gas is a cleaner alternative to oil and coal – and a “bridge” fuel to a renewable energy economy. Extracting natural gas through fracking is good for the economy and makes us less dependent on Middle East oil. Fracking wrecks the environment and causes earthquakes.”* Yale Climate Connections

Another factor to consider with regard to sustainability is the current instability of the local economy and the shifting tides of the global economy. The costs associated with LNG set up, supply and usage are extremely high and unpredictable. Given that we have a relatively low consumption use and population compared too much larger island nations there are risks with being over dependant on LNG, while also being over taxed in the long term due to its huge initial and ongoing infrastructure and investment.

*“LNG is simply too large of an infrastructure project for many smaller nations, at least if it is built at the scale that is economical and typical today. If small island nations were to commit to LNG, one terminal would likely be more than enough to fuel their entire power sector. While this may seem attractive at first, it is in reality a dangerous investment. A single terminal could potentially act as the choke point for an entire nation’s power needs. Especially in regions that are prone to natural disasters, it would be wiser to diversify power infrastructure investments.”* <http://www.worldwatch.org/role-liquefied-natural-gas-small-island-states>

With Bermuda positioned in the path of devastating Hurricanes yearly are we able to mitigate the risks to all 60k+ residents who may be affected by either a catastrophic incident directly related to LNG presence or the sole reliance on it?

## **Safety:**

*"An unexplained blast this week at a liquefied natural gas (LNG) facility in rural Washington state, which injured workers, forced an evacuation and raised alarm about a potentially large second explosion, could focus attention on the risk of storing massive gas supplies near population centers."* <https://www.scientificamerican.com/article/blast-at-liquefied-natural-gas-site-casts-spotlight-on-industry-safety/>

*"Most proposed LNG export plants would also be located far from population centers, reducing the risks from an incident."* <https://www.scientificamerican.com/article/blast-at-liquefied-natural-gas-site-casts-spotlight-on-industry-safety/>

Given that Bermuda does not have the luxury of having large unused landmasses to isolate LNG storage facilities from potential catastrophic risks, let alone the safe supply lines needed to feed the energy plant located half an island away, are we really ready to take a chance putting our population in harm's way every single day with full reliance on such a volatile energy source when we have the opportunity to provide a much safer local option?

*"It's no secret that much of the infrastructure for the transport and storage of natural gas is aging and vulnerable to leaks and explosions."*

*In 2010, a massive gas pipeline explosion in San Bruno, California, just south of San Francisco, levelled a neighbourhood and killed eight people. The National Transportation Safety Board concluded that the cause was a defective seam weld in a pipeline segment. Meanwhile, decaying pipes in New York City have been called a "ticking time bomb."* <https://www.yaleclimateconnections.org/2016/07/pros-and-cons-the-promise-and-pitfalls-of-natural-gas/>

## **Cost:**

*"The cost of renewable energy is now falling so fast that it should be a consistently cheaper source of electricity generation than traditional fossil fuels within just a few years, according to a new report from the International Renewable Energy Agency (IRENA)."* <https://www.forbes.com/sites/dominicdudley/2018/01/13/renewable-energy-cost-effective-fossil-fuels-2020/#61cded784ff2>

*"Price volatility: Increasing dependence on natural gas for electricity generation sets up households and businesses for potential electricity price spikes. The natural gas industry has a well-documented history of price volatility due to the nature of its production, storage, and transmission; the fact that it supplies many end uses; and its susceptibility to extreme weather events."* <https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/natural-gas-gamble-risky-bet-on-clean-energy-future#.W-3NZY2JJQJ>

*"Natural gas prices surged to a more than four-year high in panicky and volatile trading Wednesday"* <https://www.cnbc.com/2018/11/14/natural-gas-prices-surge-jumping-as-much-20-percent-in-wild-trading.html>

I'm not sure there is much debate in the area of cost comparison with regard to AE and LNG or Fossil fuel as a start-up or long term return on investment. The BE / Etude study details a very clear picture of how Renewable Alternative Energy (RAE) supply will not only provide for a better financial model for Bermuda, but it will also provide a more stable long term financial projection by removing the instability of LNG global market pricing.

The obvious huge question is "does and can money stay within Bermuda"? With the BE Solar RAE plan it's clear that it does, while the alternate plan put forth which includes LNG start up sends a bulk of the financial pie off island.



**Jobs:**

*"The most rapid renewable energy job growth has come from the solar and wind sectors, which rose by 24.5 percent and 16 percent, respectively, from 2016 to 2017."*

<https://www.edf.org/energy/clean-energy-jobs>

Solar & Wind generated power supply would inject immediate internal job growth via existing local expertise and ongoing maintenance which can easily be managed by our local workforce.

*"The report estimates that solar and wind jobs are growing at a rate 12 times as fast as the rest of the US economy and suggests that 46% of large firms have hired additional workers to address issues of sustainability over the past two years."*

<https://www.businessinsider.com/solar-energy-job-growth-2017-1>

By choosing to focus on RAE resources not only would we be positioning our local labour force for immediate job creation but we would also be positioning future generations to come for the massive growth in RAE supplied energy.

---

Of course we can all appreciate and understand that there are many variables and logistical hurdles involved with regard to creating a sustainable, cost efficient and safe energy plan and infrastructure for Bermuda, and that there may be needs to utilize fossil fuels to some capacity in the foreseeable future. But we simply cannot ignore the obvious potential benefits to all Bermudians and the Environment by choosing to focus our energy efforts toward a more environmentally conscious and sustainable alternative energy model as is being seen throughout most progressive countries and within the BE Solar / Etude Renewable Alternative Energy Plan.

Our fight for true Independence starts with our success in winning our own self-reliant Energy Independence battles first.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



*Cory E Powell*

*Bermuda Water Management Professional*

*Founding Member and Former Chairman of the Bermuda Environmental Sustainability Taskforce (BEST)*

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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

The Electricity Act, in letter and in spirit, purports to provide the scaffolding upon which to erect a regime to conduct progressive energy policy, one that is nimble and allows us to thrive amidst rapidly changing world circumstances. The Bermuda Better Energy Plan resonates with much more fidelity to this spirit than the proposed Ascendant IRP, the latter expressing much more wishful thinking than a measured analysis should reflect.

I support the Bermuda Better Energy Plan submitted by BE Solar, for the following reasons:

1) Pricing

The BBEP attempts to maximise use of fuels that are free to extract, only having to amortise stable and predictable equipment purchase and maintenance costs over a period of time. The Ascendant IRP must do this but is also subject to much more variable fuel prices (see <https://www.macrotrends.net/2478/natural-gas-prices-historical-chart>), which also perpetually trend upward at the same time.

## 2) Diversification

The BBEP diversifies fuel streams, technologies and geographies, whereas the Ascendant IRP perpetuates a monoculture in every dimension. This is, immediately, a national security problem on steroids, making us more vulnerable to both economic and natural catastrophes at the same time. (See <https://share.america.gov/diversifying-energy-sources-boosts-security/>)

## 3) Ecology and Conservation

The Ascendant IRP expresses the least concern with carbon footprint, not at all attempting to anticipate or encourage broad efficiency gains. The BBEP incorporates both the existence of such concerns and the emerging technologies that are springing up worldwide to address them. (See <https://business.financialpost.com/commodities/energy/lng-growth-to-propel-oil-and-gas-industrys-carbon-emissions-woodmac>)

## 4) Technology adoption

The Ascendant IRP admits only a single new technology: Liquefied Natural Gas. Furthermore, nothing about this will encourage any growth in Bermuda or opportunities for homegrown technology either. The BBEP realises technology and knowledge growth in several areas, promoting job growth as well. (See <https://www.edf.org/energy/clean-energy-jobs>). Furthermore, these technologies aren't even new anymore, so adoption and education will bring us into parity with the rest of the world. Failure to adapt threatens to turn us into a 21st century neanderthal enclave.

## 5) Grid Defection

Even as the Ascendant IRP is realised, prices for renewable generation will continue to drop, bringing those technologies into the realm of consumer deployment while the utility ignores them. When fossil fuel prices inevitably climb, more pressure will be placed on consumers to cover the gains, prompting those subscribers capable of deploying batteries and solar panels to do so, cancelling their utility subscriptions or simply not consuming as much energy. Recent reductions in demand have already produced increased utility pricing and defections have increased along with customers simply incapable of paying the newer rates, who also count as defections. The BBEP specifically relies on distributed energy generation, providing incentive for such participants to remain part of the national grid by avoiding having to transfer fuel price changes onto customers. (See <https://www.utilitydive.com/news/is-grid-defection-still-a-threat-to-the-utility-business-model/440272/>)

The links I have provided of relevant articles and/or data supporting these positions were trivial to obtain, and anyone even the least bit interested has a wealth of information available via peer reviewed journals or news outlets.

Thanks for your attention to my response and I eagerly anticipate the outcome of this consultation.

Yours sincerely,

Damion K. Wilson

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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*19 November 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Bermuda needs to set an example to the rest of the world. If 60,000 people can't do it how can the world

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

*Daniel Edmunds*

Patricia & David Cook  
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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

22 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *We support this plan as it encompasses the use of renewable energy, not fossil fuels, as Bermuda's future energy supplies. We owe this to our children, grandchildren & as an example to the rest of the world & that we serious about conservation & the environment around us. The plan will reduce the cost of generating electricity which among the highest in the world, and is dependent on the fluctuation of oil prices. Belco's plan does not reduce the cost only looks after their shareholders.*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

David Cook  
Patricia Cook

“Response to Consultation Document: Comments on IRP Bulk Generation Proposals”

I have studied the basics of both proposals and must strongly support the Bermuda Better Energy Plan . The Belco proposal uses outdated, expensive and environmentally unfriendly technology which will be even more outdated by the time it is completed and implemented- it is time we started looking to the future and embracing innovative and proven methods that will harness our natural resources and provide a viable and economical solution to our future energy needs.

David Ezekiel

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Smiths FL05 , Bermuda

Cell – 525-7845

Email: dez@vlm.bm

**From:** [David](#)  
**To:** [Electricity](#)  
**Subject:** Support For The Bermuda Better Energy Plan  
**Date:** Friday, November 23, 2018 6:20:44 PM

---

Sir,

Please accept this email as my support for the Bermuda Better Energy Plan. To consider an alternative plan which focuses on the continued use of fossil fuels without significant input from the public would be irresponsible. BELCO provides an essential service that impacts every single person living on our beautiful little island, so it is essential that such an important decision as the future of our electricity supply be debated in the public sphere. There should be a broad education process so that decisions can be arrived at based on knowledge, understanding, economics and consequences of making the wrong decision.

Regards,

David



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Monique Lister  
Regulatory Authority  
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8 Wesley Street  
Hamilton, Bermuda

23<sup>rd</sup> November, 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *The BBEP offers an alternative to 'status quo' business interests that will potentially eliminate competition in the energy sector for another 20 to 30 years.*
- *The BBEP offers an alternative to LNG, an energy source which is not well suited to Bermuda in my opinion.*
- *The BBEP promotes innovation, developing technologies and proven technologies that will benefit Bermuda moving forward, and offer ways to make Bermuda more competitive.*
- *The BBEP offers a common-sense avenue for change in a market where energy rates are among the very highest in the world.*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



David W. Cox

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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

20 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is consistent with creating a submarine fiber optic cable corridor to support the government's FinTech initiative. Sustainable, reliable, and alternative energy options are a very important component of the relevant messaging to those industries we are trying to attract to Bermuda as part of the global transit traffic market.

Organizations such as Google, Amazon, Facebook, and Apple are investing in submarine cable systems and the new Bermuda submarine cable initiative is looking to attract these organisations to Bermuda. A critical aspect for submarine systems is power regeneration as they transit the Atlantic Ocean, and Bermuda is ideally located to serve this market. These industry players are particularly sensitive to environmental messages and identify with alternative (and low cost) energy generation.

The Bermuda Better Energy Plan would add significant support to the FinTech initiative being promoted.

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

Thank you for your time in reviewing my response, I look forward to learning of the outcome of the IRP consultation process.

Yours sincerely,

Dean Rea

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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

23 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,


I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *Supports a greener Bermuda, which is overdue at this point.*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



Derek F. P. Ratteray

25<sup>th</sup> November 2018  
P. O. Box SN 145  
Southampton SNBX

25<sup>th</sup> November 2018

Regulatory Authority of Bermuda  
c/o Ms. Monique Lister  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton HM 11  
By email: [electricity@RAB.bm](mailto:electricity@RAB.bm)

Dear Ms. Lister,

**RE: Comments on Integrated Resource Plan (IRP) Proposal Consultation**

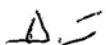
Please find my response to the Regulatory Authority of Bermuda's consultation on the Integrated Resource Plan Proposal (IRP).

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- It is the most consistent with the purposes of the Electricity Act 2016 and the Ministerial Direction for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- It provides a holistic approach to providing sustainable energy production for the island.
- By reducing the use of fossil fuel, the capital used to purchase these fuels can be circulated on within the island.
- Diversifying the sources of energy, there would be less of a need to retain large amount fossil fuel in the island thereby reducing potential environmental hazards

Thank you for taking the time to review my response and I await the opportunity to learn of outcome of this consultation process.

Kind regards,



Dexter Swan

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Bermuda

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November 21, 2018

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

Dear Ms Lister,

**Re: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

Of the two proposals submitted to the Regulatory Authority I support the Bermuda Better Energy Plan submitted by BE Solar (the "BBEP") as this plan:

- Moves our country away from an unhealthy dependence on commodity prices outside of our control.
- Factors in future generations of Bermudians by looking for cleaner means of generating electricity.
- Diversifies reliance for energy generation away from our single utility model.
- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity.
- The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Appears to have been developed using detailed and transparent assumptions and methodologies and based on actual case studies and inputs from other jurisdictions that are moving in a progressive and environmentally sustainable direction.
- Is in line with the United Nations Sustainable Development Goal No.7 – targeting the move to more affordable and cleaner energy by 2030.

Thank you for reviewing and considering my response when making a decision on the  
IRP Bulk Generation Proposals before the Authority.

Yours very truly

Diana Carr

**From:** [Dudley Cottingham](#)  
**To:** [Electricity](#)  
**Cc:** [Debbie Cottingham](#); [monkeygirlmlc@gmail.com](mailto:monkeygirlmlc@gmail.com); [cottingham2016@gmail.com](mailto:cottingham2016@gmail.com)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 9:37:24 PM

---

We wish to confirm our support for the Bermuda Better Energy Plan and in particular the proposal submitted by BE Solar.

Regards

Dudley & Debbie Cottingham

Sent from my iPad

**From:** [Eddward Wright](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan .  
**Date:** Saturday, November 24, 2018 10:59:14 AM

---

Dear RAB , I support the Bermuda Better Energy Plan . My wife and I attended lectures and hands-on installation lessons on home solar water panel systems given by Bermuda Energy Conservation Ltd , before being one of the first residents to mount a panel on our roof. It paid for itself and was the subject of scrutiny by friends and neighbours who were considering the electrical cost savings they may enjoy by installing one on their roofs. During the summer hot water was available for free, no water heater was necessary. I have electrical panels installed on my boats which keeps the bilge pumps active and has prolonged battery life. I have been benefitting from the cost effectiveness of solar power for over 45 years . It works ! Clean renewable wind and solar power is the only choice if Bermuda's future economic competitiveness is to be protected. Edward Wright , St. David's.



Erich Hetzel  
PO Box HM 1730  
Hamilton HMGX  
505-1000  
[ehetzel@northrock.bm](mailto:ehetzel@northrock.bm)

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda  
[electricity@RAB.bm](mailto:electricity@RAB.bm)

20 November, 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals. It is encouraging to see the number of responses to date, some of which are extensively detailed. Unfortunately, it difficult for a layperson to comment in depth regarding the industry specific, or economic details of the detailed plans. The BELCO IRP was obviously formulated over many months at significant cost by industry consultants. Therefore, the public must rely on Government to thoroughly analyse not just the submissions from commercial companies, but also to look to independent sources and or to conduct its own independent analysis of what the best course is for the country to take in regards to our energy future.

In my response, I have used the purposes of the Energy Act 2016 (EA2016) as a guide to the whether an IRP meets the standards as set out in the Act.

Bermuda needs to diversify its energy sources and its energy suppliers. On the supply side, one only has to consider the recent industrial action in October 2018 where BELCO was reported to have stated "BELCO cannot guarantee full electricity supply to the island" (during that industrial action). I think this quote should stand as a waypoint to the RA and the Bermuda Government in this consultative process and in developing an energy plan. Bermuda can not afford to rely on a single provider of electricity that cannot guarantee its

supply. That statement, if taken in the context of BELCO's IRP, would result in the BELCO IRP failing the first requirement of the EA2016 which states that the purposes is *"to ensure the adequacy, safety, sustainability and reliability of electricity supply in Bermuda so that Bermuda continues to be well positioned to compete in the international business and global tourism markets"*. Another example of this need was the BELCO fire in 2005 that resulted in an island-wide blackout. To guaranty our energy security, Bermuda can not continue to rely on a single supplier (or site) for its energy supply. While it is practical to have only a single grid, the grid should be in a separate corporate entity from suppliers to ensure a fair Feed-in-tariff (FIT) is maintained.

In my opinion, the IRP submission by BELCO, lacks vision and is regressive. The BELCO IRP is generally conservative and plays into its historical monopolistic business model. BELCO's IRP continues to rely heavily on fossil fuels at a time in which the world is in desperate need to reduce carbon emissions. Though it does propose reducing carbon emissions through the introduction of LNG as a fuel source, LNG use in Bermuda carries its own set of issues.

To reduce Bermuda's carbon footprint, we must introduce more renewables. There are ample examples from around the globe of successful deployments of renewable energy solutions. Even sun starved places such as Germany have current solar penetrations far greater than Bermuda. This is both embarrassing and concerning, especially considering the high cost of our electricity due reliance on imported fuel. There is no reason that solar technology penetration in Bermuda can not be greater. At the residential level there is a relatively quick repayment of capital from solar technologies (distributed solar PV and hot water). Residential solar also has the benefit of distributing the capital costs. In particular, the penetration of solar hot water in Bermuda is dismal. Barbados by contrast has the highest penetration of solar hot water, partially due to the availability of a variety of products at very cost effective prices (far below what is discussed in the BELCO IRP). At the commercial level, Bermuda has yet to install a commercial grade solar farm.

This is not to indicate that distributed solar or even bulk solar is necessarily the least expensive energy source. That however should not be the primary driver of our energy future – carbon reduction and overall less environmental impact should be. The BELCO IRP is focused only on cost models.

Likewise, wind energy, has been widely and successfully deployed around the globe, yet is not analysed in the BELCO IRP. The BELCO IRP states "offshore wind resources were screened out from further consideration because of cost and logistical uncertainties that require addressing in a feasibility study." Wind energy is available twenty-four hours a day, so provides a source of renewable energy source during the evening hours. Despite this, it

was not evaluated in the BELCO IRP which is a major deficiency. Though wind energy may present some of its own environmental concerns, it must be considered in any IRP. For these reasons I would say that The BELCO IRP fails to meet the Energy Act 2016 (EA2016) purpose *“to promote the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources.”* . By contrast, The Bermuda Better Energy plan does include a very large wind component.

Bermuda must do more to introduce and encourage the use of renewable energy sources. If Denmark can establish a goal of generating 70% from renewables by 2022, then Bermuda can certainly formulate a plan that approaches that.

It is instructive to note that jurisdictions with highest rate of renewable use also have highest supply reliability (as measure by outages).

<https://www.greentechmedia.com/articles/read/the-countries-with-the-most-wind-and-solar-have-far-fewer-outages>

Reliability is included in the first purpose of the EA2016. The Bermuda Better Energy Plan does include a large portion of its supply from renewables.

The BECO IRP also does not include any serious evaluation of the benefits gained from encouraging energy efficiencies and conservation. Why would it though, given that's the company's purpose is to sell electricity. The reality is that huge saving will be made in demand through the introduction of modern lighting; the introduction of energy efficient appliances; employing more energy efficient building designs and improvements; and simply turning energy utilizers off. Conservation and efficiency efforts do not necessarily require action from our energy suppliers, but should be part of the discussion and plan. It will require Government action in the form of education; new regulations; and possible duty reductions to gain benefits from conservation and efficiencies. Targets for achievable energy use reductions should be established and monitored. Toward that goal the BLECO IRP fails to thoroughly elucidate potential gains that might be made thru conservation and efficiency methods. Therefore the BELCO IRP fails in the requirement under the EA2016 *“to encourage electricity conservation and the efficient use of electricity.”* The Bermuda Better Energy Plan does discuss the benefits of conservation and efficiencies in depth.

A general concern with both BELCO's IRP and The Bermuda Better Energy Plan is that the demand forecast may be overly conservative (though BELCO offers variations). It bears serious consideration that currently BELCO's demand is again falling. In the absence of other data, it has to be assumed that this due to a declining population affecting residential demand. There is likely a concomitant decline in commercial demand due to a contraction in both international and local businesses. We have entered a time that buildings are being

demolished rather than constructed. None of these trends show any sign of abating in the near future. Therefore, it is possible that the demand forecast stated in the IRP remains overstated. This would seem to bolster the case for a more diverse supply and a greater reliance on more distributed solar.

BELCO's IRP relies heavily on fossil fuels and it concludes that LNG is the preferred fuel. If we were considering LNG strictly on the case for carbon reduction, then this fuel might be the preferred choice. Unfortunately, there are many other considerations. The first is safety. I have only a passing knowledge of LNG handling and storage. However, having once lived near an LNG terminal, where the topic of facility safety was part of the normal public discourse, I am aware of some of the requirements. Based on that, it seems doubtful to me that Bermuda could meet normal safety requirements mandated in most jurisdictions for an LNG terminal and storage facility. LNG pool fires and vapour clouds are serious concerns. For this reason, normally there are dike and exclusion zone requirements around tanks, plants and terminals. The terminals themselves are normally located far offshore. Storage tanks however would be located onshore and it would be a question whether a safe exclusion zone could be established, given the confines of Ferry Reach. Also, note that the proposed LNG terminal is proposed to be side by side with the existing fuel storage facility that has its own safety issues, before adding LNG storage concerns to the site. This facility is also adjacent to our airport. In addition, after regasification NG would have to be piped to the generation facility, posing safety risks along the path of the pipeline. These are not minor concerns, as there are numerous cases of serious fires at LNG facilities and at least one gas-liquification facility (the reverse of what Bermuda requires) that was partially destroyed in an explosion.

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In addition, gas explosions due to pipeline faults happen. These concerns are glossed over in the BELCO IRP. It would seem that LNG safety concerns have to be evaluated before any IRP based on LNG could be accepted. The other consideration concerning NG is its environmental impact in the localities where it is extracted. There is a well-documented debate regarding the environmental impacts and dangers of NG extraction. Even if we were to ignore those concerns as someone else's problem, changes to environmental legislation could impact the price of LNG in the coming years. There is also consideration of the capital intensive nature of the introduction of LNG as a fuel source. This in fact negates most of LNG price benefit. I believe the reality is that BELCO's data does not present compelling evidence to justify a switch to LNG, especially given the potential safety concerns. The Rocky Mountain Institute elucidates the reasoning why LNG is the wrong choice for the Caribbean in their article *Four*

*Reasons Why LNG is the wrong choice for Electricity in the Caribbean* (2014). The reasoning holds for Bermuda as well

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LPG however may provide a better, safer alternative, but the BELCO IRP shows a delay in the use of LPG in its IRP.

One issue that is not discussed in the BELCO IRP is climate change. Though not specifically required, given that it is the most pressing problem that will affect mankind in the coming decades, it is somewhat amazing that it does not garner even a token mention. This is a major failing in BELCO's IRP, even if it is specifically not required. Leaving global consequences aside, the sad reality is that low-lying areas in Bermuda, such as where the airport and BELCO generators are located, will potentially flood within the next generation's lifetime. It is hard to fathom that we as an island nation have not coming to terms with the reality of Climate Change and are not doing our part to combat it. On an international level and in the IRP submissions, one interesting thing I have observed is how short term fuel costs (20 years) are compared with the costs of introducing carbon reducing technologies. Rarely do the costs of climate change come into the calculations. Climate impacts will present huge costs to all countries and those will have to paid in the coming years. Globally businesses continue to be based on short-term economic plans that allow them to dump hazardous materials into the environment at no cost. This is a continuing and widespread market failure that should not be allowed. Though we wish that the air pollution caused by the BELCO stacks and car emissions had no affect, it is very likely that they result in negative health impacts and other costs to Bermudians. We are part of the global climate change problem. The only viable solution is to move away from combustion based generation to renewable energy sources.

The other benefit of moving to renewables is that it lessens our reliance on the importation of fossil fuels. This will improve our balance of payments and thereby stimulate our local economy and increase employment locally.

The only IRP that meets the goals of the EA2016 and is generally progressive is the Bermuda Better Energy Plan. The Bermuda Better Energy plan is a visionary plan that could transform Bermuda's energy future. It combines a sustainable mix of renewables and fossil based generation, along with a vision for conservation and efficiency gains. While there are details that need to be addressed, the Bermuda Better Energy Plan should become the basis for our future energy production. This plan achieves all the objectives of the EA2016.

While not necessarily pertinent to this IRP response, it should be noted that Government does not need to wait for yet more studies and analysis before acting to encourage the adoption of solar technologies, efficiencies and conservation. It is clear from the data and real life experiences, that solar technology is economically viable in Bermuda. Government has reintroduced the rebate program for solar installations and that is a start. It would seem that a public education campaign and solar financing scheme may be warranted to stimulate further uptake. Of significant benefit would be to increase the Solar PV Feed in Tariff (FiT). The reduction of FiT has given BELCO the benefit of people's excess residential PV capacity. Some people now have the erroneous impression that solar panels are not economically viable due to the reduced FiT. To the contrary, under the current FiT not only do solar panels remain economically viable but, battery storage technology is also now economically viable. The current FiT is counterproductive if our goal is to increase distributed solar production. Any cap on residential solar production is also counterproductive to increasing our distributed solar PV production. Another change that could be implemented now is to require that new construction meet certain standards aimed at energy neutrality (Net Zero Energy Building). It is time that Bermuda consider requiring all homes and business to have some energy production capability. Duty rebate on high efficiency lighting and appliances would also stimulate conservation measures.

Respectfully;

A handwritten signature in blue ink, reading "Erich W. Hetzel". The signature is written in a cursive, flowing style.

Erich Hetzel

Please provide a written confirmation of receipt of this submission

Erich Hetzel  
PO Box HM 1730  
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[ehetzel@northrock.bm](mailto:ehetzel@northrock.bm)

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda  
[electricity@RAB.bm](mailto:electricity@RAB.bm)

20 November, 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals. It is encouraging to see the number of responses to date, some of which are extensively detailed. Unfortunately, it difficult for a layperson to comment in depth regarding the industry specific, or economic details of the detailed plans. The BELCO IRP was obviously formulated over many months at significant cost by industry consultants. Therefore, the public must rely on Government to thoroughly analyse not just the submissions from commercial companies, but also to look to independent sources and or to conduct its own independent analysis of what the best course is for the country to take in regards to our energy future.

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The other benefit of moving to renewables is that it lessens our reliance on the importation of fossil fuels. This will improve our balance of payments and thereby stimulate our local economy and increase employment locally.

The only IRP that meets the goals of the EA2016 and is generally progressive is the Bermuda Better Energy Plan. The Bermuda Better Energy plan is a visionary plan that could transform Bermuda's energy future. It combines a sustainable mix of renewables and fossil based generation, along with a vision for conservation and efficiency gains. While there are details that need to be addressed, the Bermuda Better Energy Plan should become the basis for our future energy production. This plan achieves all the objectives of the EA2016.

While not necessarily pertinent to this IRP response, it should be noted that Government does not need to wait for yet more studies and analysis before acting to encourage the adoption of solar technologies, efficiencies and conservation. It is clear from the data and real life experiences, that solar technology is economically viable in Bermuda. Government has reintroduced the rebate program for solar installations and that is a start. It would seem that a public education campaign and solar financing scheme may be warranted to stimulate further uptake. Of significant benefit would be to increase the Solar PV Feed in Tariff (FiT). The reduction of FiT has given BELCO the benefit of people's excess residential PV capacity. Some people now have the erroneous impression that solar panels are not economically viable due to the reduced FiT. To the contrary, under the current FiT not only do solar panels remain economically viable but, battery storage technology is also now economically viable. The current FiT is counterproductive if our goal is to increase distributed solar production. Any cap on residential solar production is also counterproductive to increasing our distributed solar PV production. Another change that could be implemented now is to require that new construction meet certain standards aimed at energy neutrality (Net Zero Energy Building). It is time that Bermuda consider requiring all homes and business to have some energy production capability. Duty rebate on high efficiency lighting and appliances would also stimulate conservation measures.

Respectfully;

A handwritten signature in blue ink, reading "Erich W. Hetzel". The signature is written in a cursive style with a large, stylized 'H'.

Erich Hetzel

Please provide a written confirmation of receipt of this submission

Frances Eddy  
22 Paddock Drive  
Warwick WK 04  
Bermuda  
238-0059  
franceseddy15@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

17 November, 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *It is imperative that we take bold steps to dramatically reduce our dependence on non-renewable resources. I understand that BELCO has an infrastructure to maintain but I see liquid gas as a short term, modest, and cautious move in the direction of sustainability. There is plenty of evidence (without having to site them here to bore you) that warns us of the urgency of moving to alternatives that have far less impact on the environment and resources. As a person who has long been observing the effects of the use of fossil fuels in the food supply chain we can expect greater challenges in the future to food security if we do not embrace a lower cost and less detrimental source of energy sooner rather than later.*
- 

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Frances Eddy

Gaëlle Roth  
5 Millhouse bay Lane  
Hamilton Parish  
CR05  
Bermuda  
441 599 5249  
gaelleroth@hotmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

18 November 2018

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Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

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- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Gaëlle Roth

**From:** [Miller, Gail](#)  
**To:** [Electricity](#)  
**Cc:** [Reid Henderson \(rhender11@gmail.com\)](#); [Riley Henderson \(riley.henderson@lancashiregroup.com\)](#)  
**Subject:** Better Bermuda Energy Plan  
**Date:** Wednesday, November 21, 2018 11:09:46 AM

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Good day Regulatory Commissioners,

I am a Bermudian born and raised with two children (copied). Each and every month I pay my horrendous Belco bill as we need electricity to live a normal life. The cost of electricity ranks up there in my monthly expenses behind mortgage / rent and food. We (BERMUDA) need to do better than continuing to support BELCO and their energy plan. It's time Bermuda was open to new / renewable energy sources. The rest of the world is evolving and we must do so to. I fully support the Bermuda Better Energy Plan.

On behalf of myself and my family we implore you to explore the recommendations made in the Bermuda Better Energy Plan.

Thank you for doing the "right thing" for future Bermuda generations.

Gail Miller

Gail E.M. Miller, JP | VP, Human Resources & Administration

**The OIL Group of Companies**

3 Bermudiana Road | 2<sup>nd</sup> Floor | Hamilton HM 08 | Bermuda

Tel: 441.278.1167 | Cell: 441.505.9099

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**From:** [Gavin Davis](#)  
**To:** [Electricity](#)  
**Cc:** [kerry graham](#)  
**Subject:** Response to Consultation Document: Comments on IRP Bulk Generations Proposals - support for Bermuda Better Energy Plan  
**Date:** Thursday, November 22, 2018 9:06:55 AM  
**Importance:** High

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November 22, 2018

Monique Lister  
Regulatory Authority  
1<sup>st</sup> Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

RE: Regulatory Authority of Bermuda (RAB) / IRP Bulk Generations Proposals.

Dear Madam,

Please accept this letter as our full support for the [Bermuda Better Energy Plan](#) (in lieu of kicking the can down the road with the Belco plan).

As a Bermudian couple with 3 young boys, our family budget is tight. We have lots of bills...bills bills bills and they never seem to get any easier to pay off!

The Belco bill is always one of the biggest next to rent and groceries each month. Our boys don't always understand it when we tell them to turn off the lights or TV or computer when they aren't using it, but one day they will and that the Belco meter is running!

We have read several RAB plans, and The Belco plan appears to be antiquated and old-world thinking.

Lets face the facts, We have "ONE PLUG" with Belco. That fire a few years back reminded us all just how FRAGILE this aging and dated facility really is and how lucky we have been to not have further SERIOUS power disruptions to the our island utility.

The fact is ONE PLUG, (one very expensive fossil fuel plug at that!) simply doesn't cut it any longer. We need progressive ideas, present day solutions to meet our future problems.

Belco is a publicly traded company who's interests are aligned with their board and shareholders – NOT the people of Bermuda. Of course they are backing their plan that will continue to line their pockets and bankrupt the citizens of this country, however their plan is UNACCEPTABLE and flawed OLD WORLD THINKING.

SO we beg of you to fully consider that there are much better alternative out there. What happens if there's another belco fire? A more devastating one? How will we 'plug' our island back in? Surely IB and tourism will suffer and that GDP will be lost forever.



The island needs – requires – redundancy and resiliency to our power grid. We need to decentralize the grid with other viable alternatives should something happen to the main BELCO plant (again). Tynes Bay, Offshore wind farms and PV solar arrays all seem like OBVIOUS answers to this gravely concerning problem of our dependence on foreign fossil fuels. Answers that are long overdue late into 2018....

So in closing, thank you for your time and consideration. I know you will all make the right choice, not for you, but for the next 7 generations of our beautiful island of Bermuda.

Please provide your written confirmation that this letter has been read and received.

Many thanks & blessings,

Gavin Stewart Davis  
Kerry Suzanne Graham  
Oscar George Magee Davis (11)  
Isaac Henry Davis (9)  
Augustus William Davis (5)

**Gavin Davis** | SVP, Head of Property Insurance Bermuda

**Hamilton Re**

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**From:** [Gemma Hopkins](#)  
**To:** [Electricity](#)  
**Subject:** Vote for Bermuda Better Energy Plan  
**Date:** Tuesday, November 20, 2018 12:07:18 PM

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To Whom It May Concern,

I am writing to support a vote towards the Bermuda Better Energy Plan. Why we would invest in fossil fuels in this day and age is beyond belief. Please do not let this travesty happen to our beautiful island and the environment. My children's adult lives are looking fairly bleak if we don't do everything in our power to protect and improve the world's environment by any and all means necessary.

I could go on highlighting benefits of renewable energy sources and the pitfalls of fossil fuels but I suspect these are abundantly clear to you already.

Kind regards,

Gemma Hopkins

**From:** [George Holdipp](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Tuesday, November 20, 2018 4:28:47 PM

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Good Day,

After reading Sir John Swan and Michael Murphy's opinion piece in the Royal Gazette I am convinced more than ever that our island should adopt the Bermuda Better Energy Plan over the Belco Plan which I feel places far too much reliance on fossil fuels and neglects more environmentally friendly alternatives. The choice we face is blatantly clear, we can travel down a road to disaster with the Belco plan or invest in the Bermuda Better Energy Plan. May God guide you in your deliberations and give you the strength to do the right thing.

Yours Truly

*George Holdipp*  
TECHNICAL OFFICER

BERMUDA SHIPPING AND MARITIME AUTHORITY

Phone: (441) 295-7251  
Fax: (441) 295-3718

Regulatory Authority  
1st Floor, Craig Appin House 8 Wesley Street  
Hamilton, Bermuda

Attention: Monique Lister

**Reference: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

As a solar energy user, I think the BELCO proposal needs to be improved, and incorporate more solar and other renewable energy. If countries to our north which have far less sunlight and own more fossil fuels themselves, can produce more than a third of their energy from renewables, then I do not understand why Bermuda lags so far behind.

Government owned properties should lead the way in installing solar installations on their own buildings to reduce their dependence on fossil fuel generated electricity, not to mention the environmental improvement.

Regards

George Trott

Homeowner.

*Gil Nolan  
9 Devon Point Lane  
Devonshire  
FL05  
Bermuda  
441-333-7764  
gilnolan007@gmail.com*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*20 November 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan Proposal (the proposal) developed at the request of Bermuda Engineering Company Limited (BE Solar) by Etude, as a response to the Regulatory Authority of Bermuda's consultation on the TD&R licensee's Integrated Resource Plan (IRP) for Bermuda. None of the proposals submitted are perfect. However, I recommend that this proposal should be chosen as the base line strategy for Bermuda to work from.

*This is why:*

The best potential exists for positive economic success and sustainability of Bermuda and "Bermuda Incorporated" over the next 3 years and over the next 20 to 30 years. An appropriate IRP based on this proposal will attract and maintain business to and in Bermuda!

The approach used in this proposal closely follows the guidelines set out by the Regulatory Authority of Bermuda and the Electricity Act 2016 with regards to integrated resource plan development. The proposal is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. As part of a complete solution, the plan provides clear and convincing evidence that cleaner renewable energy can stabilise energy costs while delivering a substantial reduction in carbon emissions.

Over the next 3 years, the potential exists for a broad Bermuda consensus to be built around a final IRP that is based on this proposal. General IRP consensus is highly important in order to have the public and investors in Bermuda believe that we are doing the right thing together for everyone's benefit locally and internationally.

To manage risk in times of rapidly changing technology, one should seek to diversify investments in technologies to avoid putting all the eggs in one basket. The proposal uses technology that is in commercial use in other jurisdictions and still suggests diversification in both finance and

technology. Flexibility and adaptability in energy finance as well as flexibility in both generation and grid development options are essential today for Bermuda. The proposal demonstrates these.

On Finance: “We find companies and regions that focus currently on climate change mitigation and adaptation to be attractive investments” is a quote from the writings of an Equity Portfolio Manager and Global Industry Analyst on Energy, Renewables and Utilities, who recently gave a presentation in Bermuda to insurance capital investors on climate change related investments. Please see the conclusion in the attachment: “Brewing storm: Are investors discounting climate risks and opportunities?”

The proposal has been developed using detailed and transparent assumptions and methodologies and is based upon well researched data.

The plan responsibly considers a planning horizon of 20 years from 2018 to 2038 and presents a three-year plan to outline key short-term actions recommended to follow on to the conclusions of the analysis the proposal is based upon.

The projected 29% net reduction in energy demand in the analysis, calculated out to 2050, makes any Bermuda commitment to large scale, short term CAPEX investment in LNG and a long-term commitment to projected LNG fuel costs economically unviable. The minimum economy of scale of LNG infrastructure required for the numbers to work in the BELCO IRP proposal is not met. The minimum economy of scale requirement in the BELCO IRP proposal is based upon the Castalia report recommendations. Castalia’s consultation was a significant piece of work, by very skilled people, but is now dated. The Etude analysis is based on more recent consumption data than that used in the BELCO IRP proposal. The result is that the fossil fuels generation projected capacity “factor decreases from 66% to less than 25%”. Again, this projected scenario would be a no go for the economy of scale investment required by LNG development under the BELCO IRP proposal. Avoiding a further long-term commitment to fossil fuels as with LNG will keep more money in the local economy, supporting business and long-term jobs creation, and thus maintain or improve our national security.

The proposal considers a range of mature electrical generation technologies including fuel oil, LNG, solar photovoltaics and offshore wind. The levelized energy costs developed indicate that renewable energy sources offer the least-cost solutions in 2022 and beyond. Since the RA Bermuda is looking at a minimum 20-year planning horizon and more, starting to implement long term cost saving potential that maintain flexibility as soon as 2022 makes sense.

The proposal encourages government to be involved in encouraging the reduction of investment risk for renewables and the continued development of large scale and distributed solar. Further the proposal encourages government to help ensure that the TD&R licensee remains profitable and successful going forward as the grid and the, presently being developed, North Power Station oil fuel-based generation of 56 MW will continue to be important for all of Bermuda. To be clear, this proposal supports and works with the NPS Fuel Oil based generation development, already approved and in progress.

As a professional, I hold two degrees in electrical engineering and have experience in many technical industries from aerospace and high-volume consumer electronics to power test equipment and renewables. I was employed at BELCO for two years as a contract project manager primarily for new commercial power projects and process redesign and had a significant amount of interaction with Customer Services as well. I have a great deal of respect and appreciation for BELCO’s hard working people, their knowledge and abilities. My experience there has given me a unique perspective and

some insight into the electricity system and the trade-offs involved in managing the evolutionary design and operations of the power grid and power generation.

I would like to give credit to the government that created the Department of Energy and started Bermuda on the road to industry and public energy conversations, the development an Electricity Act and a regulatory environment that encourages healthy diversification and some competition in the energy space. The time has come to make this happen.

I agree with the conclusion captured in the proposal's executive summary: This Proposal for Bermuda is robust, forward thinking and will ensure the financial, society and environmental costs of electricity are set onto a sustainable pathway, with minimal risk to the rate paying public.

Thank you for your attention in reviewing my response, I look forward to learning of the outcome of the IRP consultation process.

Yours sincerely,



*Gil Nolan, MSEE*

December 2017



**Alan Hsu**

Equity Portfolio Manager and Global Industry Analyst — Energy, Renewables, and Utilities

As a member of the Utilities/Energy team, **Alan** conducts fundamental analysis and research on utilities and energy, including sustainable energy and clean technology. He is also a portfolio manager of our Global Environmental Opportunities approach, a dedicated, climate-focused impact strategy. Alan works in our Boston office.

#### KEY POINTS

- Climate change is an asymmetric, systemic, and largely unaddressed risk for investors.
- Climate-related asset repricing may be inevitable, potentially leading to widespread dispersion of security values.
- In our view, investors do not need to believe in climate change to recognize that addressing the risks and opportunities in their portfolios is good capital stewardship.
- Companies focused on climate change mitigation and adaptation are an evolving investment opportunity set.

## Brewing storm: Are investors discounting climate risks and opportunities?

Investors are often drawn to social, technological, or economic trends that they think may offer lasting opportunities and the potential for investment returns. From e-commerce to big data to Chinese consumption, many durable themes have the potential to cause substantial asset repricing. In our opinion, prudent capital allocation compels asset owners to remain vigilant of such trends, given the potential for new risks and opportunities to arise over time.

Today, one powerful, non-mean-reverting trend that we think many investors are ignoring is climate change. The scientific community is largely in agreement that climate risks — and attendant financial risks — are real, meaningful, and likely to become more acute over time. From our perspective, it is clear that the combination of increasing climate risks, greater corporate liability, and investor indifference has resulted in significant asset mispricing. Asset owners may want to consider a proactive, climate-dedicated approach that seeks to identify companies focused on climate change mitigation and adaptation.

### Rising temperatures have dire consequences

Global temperatures have been rising for decades and now appear to be accelerating — with no sign of mean reversion (**FIGURE 1**). A hotter world has innumerable potential consequences for humankind and the economy. Climate researchers have warned of catastrophic scenarios, including rising sea levels that inundate coastal cities, large-scale crop failures that can cause famine, waves of climate refugees migrating to temperate regions, unsustainable pressure on aging infrastructure and power grids, and the mass extinction of many plants and animals, which would further alter our ecosystem. In our opinion, investors who continue to underestimate or ignore climate risks may do so at their own financial peril — and that of their clients.

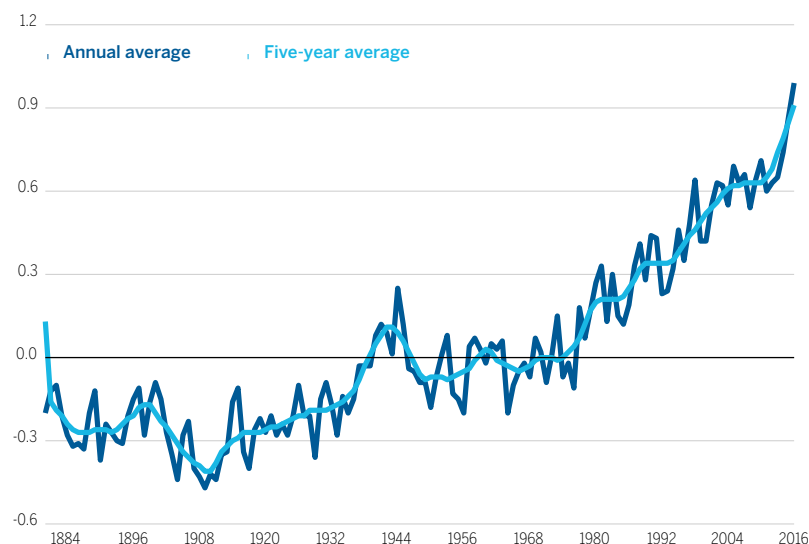


**Research indicates that by the end of the century, financial asset losses from rising global temperatures could reach US\$43 trillion in present-value terms — or 30% of the world's entire stock of manageable assets.<sup>1</sup>**

FIGURE 1

**Climate change is a trend without mean reversion**

Temperature anomaly (C°)



As of 31 December 2016 | Source: National Aeronautics and Space Administration

Exacerbating the economic and physical risk of climate change is the continual shift of urban population centers to low-lying coastal regions. According to the National Oceanic and Atmospheric Administration (NOAA), US coastal areas have become much more crowded than the rest of the country. In 2010, the US Census Bureau reported that from 1960 to 2008, the US coastal population grew by 40 million people, an 83% increase. Housing units along the US coast rose by 100% during that same period, from 16 million to over 33 million.<sup>2</sup> The global picture is the same. One study found that population density for low-elevation coastal zones is five times higher than the global density average — and is expected to quadruple by 2030.<sup>3</sup>

More population density means more economically valuable, physical-capital stock is at risk of flooding from weather events or sea-level rise. Urbanization has exacerbated flooding concerns by hampering coastal cities' ability to withstand natural disasters. Heavy rainfall and storm surges from hurricanes create drainage challenges in heavily developed areas, as asphalt and concrete aren't porous enough to absorb water. And it's not just infrastructure or personal property that is at risk. For example, according to NOAA, each year US coastal communities "produce more than US\$7.9 trillion in goods and services, employ 54.6 million people, and pay US\$3.2 trillion in wages."<sup>4</sup> Again, the threat of disruption to economic activity is enormous and is by no means unique to the US. The OECD estimates coastal flooding in large port cities including Shanghai and Mumbai could put up to US\$35 trillion in property and infrastructure at risk by 2070.<sup>5</sup>

<sup>1</sup>"The cost of inaction: Recognising the value at risk from climate change," The Economist Intelligence Unit, 2015.

<sup>2</sup><https://www.census.gov/topics/preparedness/about/coastal-areas.html>

<sup>3</sup>Neumann, B. et al. "Future Coastal Population Growth and Exposure to Sea-Level Rise and Coastal Flooding: A Global Assessment," PLOS, March 2015.

<sup>4</sup>Total Economy of Coastal Areas, NOAA, 2017.

<sup>5</sup>"Climate change could triple population at risk from coastal flooding by 2070," OECD, April 2007. This data has not been updated by OECD in recent years; however, we believe the estimate presented is still accurate.

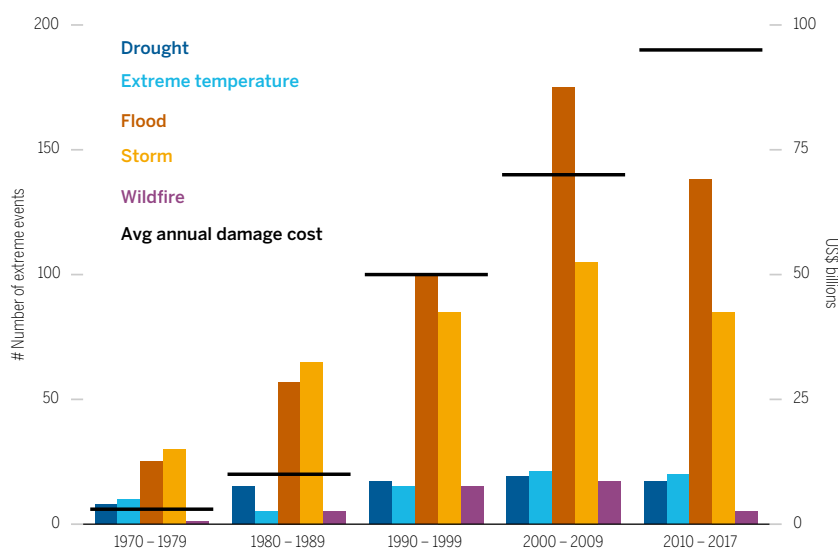
**Recovery costs from the 2017 US wildfires and hurricanes could top US\$50 billion.<sup>8</sup>**

**Hurricane Harvey was the third “500-year” flood to hit Houston, Texas, since 1979.<sup>9</sup>**

These trends — rising climate-related risks and greater vulnerability of physical and economic capital in the most climate-susceptible regions — have elevated the cost of natural disasters. **FIGURE 2** shows the growing frequency and annual costs in the US of extreme weather events, with storms and floods accounting for the vast majority of weather-related disasters. Annually, since the start of the decade, the world has experienced between 25 and 40 weather events costing at least a billion dollars, with several of those costing many times that amount.<sup>6</sup> The UN reports that between 1995 and 2015, 90% of disasters were linked to climate change at an annual cost of between US\$250 billion and US\$500 billion.<sup>7</sup>

FIGURE 2

**Damaging climate events are becoming more frequent and costly**



Data through 4 May 2017 | Source: EM-DAT Database

### Climate risk focus implies inevitable asset repricing

Markets seem to woefully underappreciate the systemic risk of climate change, and in our view, asset prices do not appropriately reflect this long-term global threat. There is now growing urgency to act, with many national governments implementing policy changes intended to mitigate and prepare for climate risk. As of this writing, more than 170 countries have ratified the 2015 Paris Agreement, for example. Many US cities and nonstate actors — including corporates — have begun to pay closer attention to climate risk. Some institutional investors in Europe and the US are already making asset allocation decisions based on carbon/climate risk exposure. Carbon trading, which exists in many regional markets today, will expand in coming years: China has declared plans to implement carbon-trading markets before the end of the decade, as has the Dutch government.

Recognizing that inadequate information on climate risks can lead to misallocation of resources and mispricing of assets, the G20 asked the Financial Stability Board (FSB) in 2015 to research ways in which the financial sector can account for climate-related issues. The FSB called on the Task Force for Climate-Related Financial Disclosures to develop climate disclosures that promote “informed investment, credit, or lending and insurance underwriting decisions.”<sup>10</sup>

<sup>6</sup>“Annual Global Climate and Catastrophe Report,” Aon Benfield, 2016. (Costs are adjusted for inflation.)

<sup>7</sup>United Nations Office for Disaster Risk Reduction.

<sup>8</sup>“House approves \$36.5 billion hurricane and wildfire package,” *The New York Times*, 12 October 2017. (Estimates based on Congressional appropriations.)

<sup>9</sup>“How to cope with floods,” *The Economist*, 2 September 2017.

This would in turn allow stakeholders “to better understand the concentrations of carbon-related assets in the financial sector and the financial system’s exposures to climate risks.”<sup>11</sup> Two years later, in early 2017, the Task Force released a set of disclosure recommendations highlighting key climate risks and describing opportunities for investment in resource efficiency and resilience.

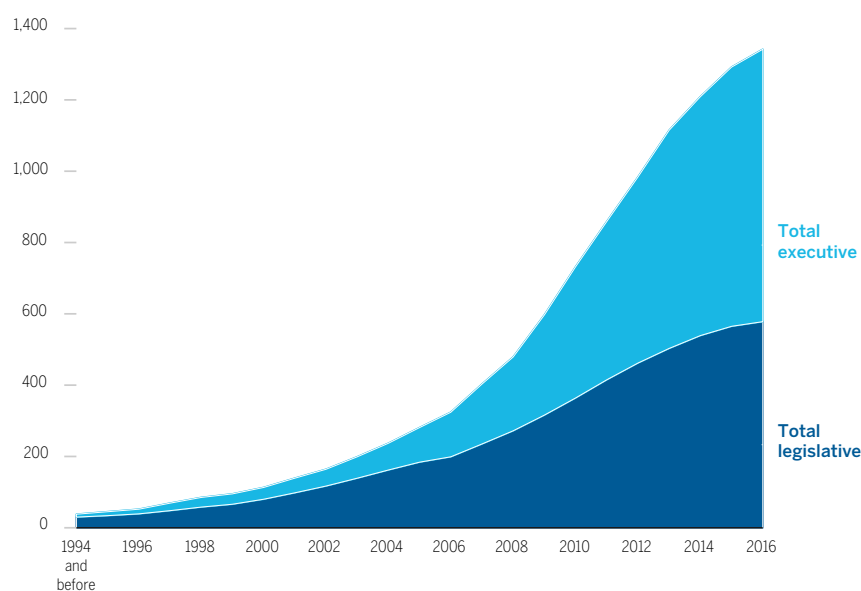
Over time, we believe financial markets will likely embrace such financial disclosures and recalibrate their views of asset values as a result. The Asset Owners Disclosure Project reported that fewer than 10% of investors calculate their portfolios’ carbon footprints.<sup>12</sup> As disclosure and reporting make climate risk more apparent, large portions of investors’ portfolios could be in more jeopardy, particularly if climate awareness results in a secular rerating of assets. Specifically, equities of companies bearing greater-than-appreciated climate risk may trade at discount rates that are too low today, so holding all else equal, those companies could be perceived as less valuable as climate-risk premiums rise. The opposite would hold true for carbon-advantaged companies. Pervasive asset repricing should also result in broad dispersion of security values across sectors, widening the gap between potential climate “winners” and “losers.”

Finally, an even more worrisome aspect of climate change that asset owners may need to incorporate into their risk-management framework is climate liability. The proliferation of carbon-reduction laws and many other regulations increases companies’ legal liabilities associated with climate stewardship. By early 2017, more than 1,200 climate laws and policies were in place across 164 countries, up from around 60 in 1997 (FIGURE 3).<sup>13</sup>

FIGURE 3

**Climate laws and regulations have been on the rise**

Total legislative and executive acts or policies



As of 31 December 2016. | Sources: Climate Change Laws of the World database, Grantham Research Institute on Climate Change and the Environment, Sabin Center for Climate Change Law.

<sup>10</sup>Recommendations of the Task Force on Climate-Related Financial Disclosures, June 2017.

<sup>11</sup>“Proposal for a Disclosure Task Force on Climate-Related Risks,” Financial Stability Board, November 2015.

<sup>12</sup>“Global Climate 500 Index 2015,” Asset Owners Disclosure Project.

<sup>13</sup>Nachmany, et al. “Global trends in climate change legislation and litigation,” Grantham Center for Climate Law, 2017.

Annual infrastructure spending requirements for climate resiliency are estimated to increase from US\$2.6 trillion to US\$4.3 trillion by 2030.<sup>15</sup>

We strongly believe that over the next decade, more regulation, ambitious climate targets, and stricter enforcement of climate-mitigation laws will be the norm around the world, regardless of the level of climate-related weather adversity, compelling governments and companies to change their behavior and mitigate any potential climate liability. We think that for many entities, maintaining the status quo or doing too little will not only be financially imprudent, but legally risky as well. Asset owners, particularly those with long investment horizons, should recognize this creeping portfolio risk and the associated asymmetric return distribution associated with it.

**Investment opportunities center on mitigation and adaptation**

There are a number of steps investors can take to prepare their portfolios for the potential effects of climate change and potentially take advantage of opportunities stemming from asset mispricing. Adding a dedicated, climate-focused strategy that is informed by the latest climate science, tracks an evolving opportunity set, and invests in companies that focus on climate change mitigation and adaptation is one possible approach. This type of strategy leverages thought leadership from the scientific community, which is actively pursuing such solutions. Leading organizations such as the World Economic Forum and the Center for Clean Air Policy both see combining mitigation and adaptation as effective ways to solve for climate risks and adversity.<sup>14</sup>

Climate change mitigation involves efforts to decarbonize our energy mix through the adoption of renewable power sources, electrified transportation, resource efficiency, and pollution control. Climate change adaptation, which accepts that some damage may be irreversible, entails mitigating risk to, upgrading, or replacing at-risk physical capital with sustainable infrastructure. Massive investments to finance the engineering and construction of climate-resilient roads, bridges, ports, railways, and buildings are needed to ensure both the long-term integrity of a country’s infrastructure and the continuity of basic goods and services such as water, electricity, and communications to affected areas during a natural disaster.

Climate change mitigation	Climate change adaptation
Renewables	Sustainable energy infrastructure
Electrification	Urban redesign
Resource efficiency	Transport infrastructure
Pollution control	Water and natural resource efficiency
	New property development

A dedicated climate strategy informed by science and the changing regulatory landscape can potentially offer institutional investors with multidecade horizons the following benefits:

- A fundamental asset-liability match vis-à-vis climate risk
- A way to manage risks beyond near-term, localized, or purely weather-related
- Liquid, scalable climate resilience
- Higher inflation sensitivity and lower reinvestment risk relative to many private climate solutions
- An effective hedge if policy, legislation, or consumer choice accelerate carbon-free or other climate-focused initiatives (including divestment)

<sup>14</sup>World Economic Forum, 2016 Global Risks Report; Shannon Uvardy and Steve Winkelman, “Green Resilience: Climate Adaptation and Mitigation Synergies,” Center for Clean Air Policy, 2014.

<sup>15</sup>“The cost of inaction: Recognising the value at risk from climate change,” The Economist Intelligence Unit, 2015. Actual data may vary, perhaps significantly, from estimates.

**The World Economic Forum lists the failure of climate change mitigation and adaptation as “the greatest global risk of the next 10 years.”<sup>16</sup>**

## Conclusion

The investment case is clear to us. The potential cost of climate-related disasters is extremely high, physical and financial assets appear mispriced, changes are likely to be inevitable, and asset repricing has already begun. From a capital stewardship standpoint, this is a practical financial issue — not a purely philosophical one. Investors don’t have to believe in climate change to recognize the need for a proactive approach to managing and hedging this long-term risk. Factoring in carbon-reduction policies and legislation, evolving standards for renewables adoption, and climate-change innovation from companies around the world, it’s clear to us that asset prices will adjust in time. With green shoots of repricing already underway, we find companies and regions that focus currently on climate change mitigation and adaptation to be attractive investments.

In our assessment, climate-aware investing bears little opportunity cost relative to global equity-market investing and may be an effective hedge for the many looming risks. Institutional investors may either help lead asset repricing or be pressured by depreciating stranded assets and rising values for climate-advantaged companies. Our conviction in the efficacy of a climate-focused investment approach stems from the myriad economic, technological, and regulatory changes that we believe will likely lead to asset repricing and generate new investment opportunities. ■

## More climate insights from Wellington Management

To learn more about Wellington’s views on the investment implications of climate change, please see:

- [“What should we do about climate change?”](#) by Spencer Glendon

<sup>16</sup>World Economic Forum, 2016 Global Risks Report.

Why climate leadership will likely come from the insurance industry

With liabilities that are often measured in decades, property and casualty (P&C) insurers are effectively long climate risk. P&C insurance companies generally accept climate science, while having a vested economic interest in managing and hedging climate risk. As a result, we believe P&C companies will likely be critical change agents in climate-risk repricing through the facilitation of climate mitigation and adaptation.

Insurance in general and the P&C industry in particular have historically served valuable societal benefits. By pooling and managing risk, insurance enables companies and individuals to innovate and test new business models. By supporting entrepreneurship and promoting trade, the insurance industry is a key economic driver. Insurance also effectively prices — and reprices — risks over time, helping to ensure the efficient allocation of capital.

FIGURE 4  
Existing climate risk-management tools have some limitations

Current tool	Limitations
Risk transfer	<ul style="list-style-type: none"><li>Does not solve long-term, systemic risk</li><li>Inefficient pricing and liquidity dynamics</li><li>Catastrophe models and forecasts reflect near-term risks only</li></ul>
Risk avoidance	<ul style="list-style-type: none"><li>Implies governance dependence on cost sharing and risk pricing</li><li>Creates insufficient price signals</li></ul>
Premium adjustments	<ul style="list-style-type: none"><li>Impacts near-term underwriting opportunity</li><li>Real costs untenable; backward-looking climate models</li><li>Default to state reliance ensures inadequate price signal</li></ul>
Private infrastructure	<ul style="list-style-type: none"><li>Inflation risk</li><li>Reinvestment risk</li><li>Difficult to scale</li><li>Illiquid</li><li>Fundamental asset-liability match unclear</li></ul>

Source: Wellington Management

Shortcomings of current risk-management tools

Today the industry attempts to manage climate risks by focusing on one of four major approaches: risk transfer, risk avoidance, raising premiums, or investing in private infrastructure (FIGURE 4). We think each of these approaches is limited in its ability to address the systemic, long-term threat of climate change.

- Risk transfer** through the use of weather derivatives or catastrophe bonds is a short-term solution that tends to ignore longer-term risks. Pricing assumes historical data, which will likely prove unreliable in the face of accelerating climate change.
- Risk avoidance** may mitigate risks for the insurer, but sends insufficient pricing signals to the marketplace, perpetuating the mispricing of climate risk. Additionally, avoidance nearly always implies eventual dependence on a state or government agency that may be ill equipped to underwrite risk.
- Raising premiums** has two potential drawbacks. First, it may limit underwriting opportunities. Second, premiums are still mostly based on backward-looking models that do not reflect future weather and climate risks. Both of these issues imply that current premiums may be too low.
- Private-infrastructure** investing can help underwrite the creation of necessary climate-resilient assets, but this approach can be difficult to scale and can present liquidity, reinvestment, and inflation-hedging risks.

The problems of correlation

In addition to these challenges, a correlation risk between insurance assets and liabilities poses a tricky dilemma. Insurance companies must ensure that their assets (in this case, their investments) do not lose value concurrent with increases in their liabilities (claims they have underwritten). Unless an insurer's liabilities on physical property perfectly price in climate change, those obligations can become more onerous over time. At the same time, if an insurer's investment portfolio is heavily exposed to assets bearing climate risk, they may face classic asset-liability mismatch.

**From 1980 to 2015, 91% of insurance-loss events globally were weather-related extremes. Those events caused 1.7 million deaths.<sup>18</sup>**

#### **An equity investment approach can help insurers manage climate risk**

In our view, it seems clear that the insurance industry should provide leadership on climate-risk repricing. No amount of insurance makes a bad risk a good risk, so in the face of accelerating climate change, we think insurers must consider more expansive, multidecadal approaches to climate-risk management. We believe that a public equity investment strategy that offers exposure to companies engaged in climate mitigation and adaptation can complement existing hedging strategies.

Decoupling investment risk from the rising climate-related liability risks that insurers are facing may be a more sustainable long-term approach. Should carbon trading or carbon taxation be more widely used, inflationary pressures on claims and other liabilities may intensify, making a liquid equity-based approach potentially additive to a broader investment portfolio. Those costs are not currently captured in most insurers' asset bases, which are still dominated by fixed income investments. In the US, for example, insurers still allocate over 60% of their portfolios to bonds.<sup>17</sup> Some portfolio allocators are beginning to recommend equity-investment-based approaches to their insurance clients as well, advocating a combination of asset reallocation (including divestment and environmental, social, and corporate governance [ESG] awareness), hedges using low-carbon indexes or derivative overlays, and engagement on policy and physical-risk disclosures.

---

#### **Additional disclosures**

This piece contains estimates and forecasts. Actual results may differ, perhaps significantly, from the estimated and forecasted data shown.

<sup>17</sup>"A firm foundation: How insurance supports the economy," Insurance Information Institute, 2017 (data supplied by NAIC and sourced from S&P Global Market Intelligence).

<sup>18</sup>Munich Re NatCatSERVICE.





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468367\_4



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Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*21 November 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Uses a healthier balance of fuel mix..

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Giles Belfrage

**From:** [Gordon Campbell](#)  
**To:** [Electricity](#)  
**Subject:** Better Energy Plan  
**Date:** Tuesday, November 20, 2018 5:54:31 PM

---

*Donald Gordon Campbell  
132 Harbour Rd  
Paget  
PG05  
Bermuda  
236-8539  
[docandahalf@hotmail.com](mailto:docandahalf@hotmail.com)*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda  
*2018*

*20 November*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,  
*D. Gordon Campbell*

**From:** [Gordon Emmerson](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Tuesday, November 20, 2018 8:16:53 PM

---

Dear Sir or Madame,

Thank you for taking the time to read this email amongst so many. My name is Mr. Gordon Emmerson, I am a Bermudian. I was born in KEMH on Oct 14 1982, to two Bermudian parents, and I had the distinct pleasure of growing up on this island until I had the continued good fortune to be able to travel overseas for my higher education.

In the walk of my life so far I have been all the way around the wide world once, and I do have plans to do that again, and more, sometime soon. But like Sir George Summers, my heart will always rest here no matter where my feet carry me in the meantime. Bermuda is my home. It is my backyard. It is my treasure and my pride that I could belong to so wonderful a place with such amazing people. I have met other people; a lot of them. The majority of them are just like us, they only use different sounds to communicate, but thats a different moral message for a different email.

The point is this; in no sane reality would, or should, Bermuda tie herself to oil, coal, and fossil fuels. Why would an island that gives off and celebrates so many different life forms - in the air, the earth, and in the ocean - commit to injecting it with oil spills and chemical run off, tar and sludge on the beaches and in the creeks, smoke stack grit making it poisonous to drink the water thats run off your own roof? For a host of reasons Bermuda should embrace clean green energy sources and I cannot list them all here. Suffice to say, the UN Climate report(s), the images from the North Pole, the record breaking Hurricanes that are now appearing \*EVERY\* year (and thankfully have only missed Bermuda for the past two years), all point towards the same WORLD WIDE GOAL.

Clean, Renewable Energy - As Soon As Possible.

Therefore, I strongly urge you to adopt the Bermuda Better Energy Plan and support the highest amount of renewable, environmentally friendly, 'clean' energy.

I strongly urge you to allow Bermuda to point the way and give an example to the rest of the world to follow. Lets adopt policies of good health and survival over policies of greed and gold.

Yours

Mr. Gordon Emmerson  
Sandys, Bermuda

Matthew and Gretchen Dill  
Warblington,  
# 6 Berwyn Hill  
Paget  
PG02

2368761  
matthewgretchendill@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

25 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *To support the Bermuda Better Energy Plan over BELCO's proposal seems to be the only sensible way to go. Why would we back a plan, which limits us to mainly fossil fuel energy production for the next 20 years when there are clearly better alternatives. We owe it to our children to lead by example and make the smart decision now. Going forward, diversification can only be a good thing. We must take advantage of current advances in this field and do everything in our power to produce our energy in the cleanest, most efficient way possible. Using as much renewable energy production as we can. The Bermuda Better Energy Plan submitted by BE Solaris by far the better proposal and has our full backing.*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Matthew & Gretchen Dill

**From:** [Dr Helen Christopher](#)  
**To:** [Electricity](#)  
**Subject:** Electricity plan  
**Date:** Tuesday, November 20, 2018 8:05:16 PM

---

Good day,

I am writing to express my concern re the danger of accepting Belco's fossil fuel based plan for Bermuda for the next 20 years. I do not support this and believe it would be in the interest of our environment and all Bermudians to instead follow the alternate plan with far more emphasis on using renewable energy resources such as solar and wind.

Sincerely

Dr Helen Christopher

Ian Mutch & Betsy Robbins-Mutch  
2 Fractious Street  
Hamilton Parish  
CR 04  
Bermuda  
292-3917  
ianmutch@icloud.com

21/Nov/2018

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton,  
Bermuda

Dear Ms Lister

**RE: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals and register my concern with the twenty-year energy plan recently put forward by BELCO. It is alarming that the BELCO Plan relies almost entirely on fossil fuels to generate energy at a time when global initiatives are underway to increase the use of renewable clean energy sources.

I respectfully request that the Regulatory Authority of Bermuda not accept the BELCO plan as a "default" plan but consider the Better Bermuda Energy Plan (BBEP) submitted by BE Solar. The BBEP incorporates greater use of renewable clean energy, uses current available technology and is more consistent with the purposes of the Electricity Act 2016 delivering a sustainable and environmentally friendly energy solution.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Ian Mutch', with a stylized, cursive script.

Ian Mutch

**From:** [Joseph Kampf](#)  
**To:** [Electricity](#)  
**Cc:** [perdikou@gmail.com](mailto:perdikou@gmail.com)  
**Subject:** Bermuda's Future Power Cost  
**Date:** Wednesday, November 21, 2018 5:02:50 PM

---

I am writing to **STRONGLY** object to the current electric cost and the BELCO plan for the future, that depends on fossil fuels, thus perpetuating these high costs.

I have a 4,000 sf home in Bermuda and an 8,500 sf home in the state of Maryland, USA. The electricity for our Bermuda home is 500% higher than our home of twice the size in the USA, even when we are not in residence in Bermuda. We get that there are fossil fuel shipping costs and processing costs...but what we don't get is why are we **LOCKED** into this power plan for the future ? Why?

As directors of BELCO you have a responsibility to me and every other homeowner on island to find the **RIGHT** solution for our power needs...meaning **CLEAN** power at an affordable price. If you do not move to efficient, clean energy (over time), you will face a backlash, outrage really, from the very customers you pretend to serve.

The short story is this...your rates are outrageous and the strategy must change. Do it now or suffer the consequences later (and not that much later) !!

J Kampf

**From:** [rhind.jack@gmail.com](mailto:rhind.jack@gmail.com)  
**To:** [Electricity](#)  
**Subject:** BBEP  
**Date:** Wednesday, November 21, 2018 1:21:29 PM

---

I wish to whole heartedly place my support behind the plan for renewable energy that is proposed in the new Bermuda Better Energy Plan.

It is vitally important that we, Bermudians, take the necessary steps to conserve energy and lower the cost of electricity in our country.

The BBEP plan is, I believe, a sound solution to our continuing rising electricity cost and dependency on fossil fuels that are becoming scarce and pollute our environment.

I hope that government will take this and other gestures of support for the BBEP seriously.

Best regards,

Jack Rhind



**From:** [RBYC F&B](#)  
**To:** [Electricity](#)  
**Date:** Tuesday, November 20, 2018 12:31:50 PM  
**Attachments:** [image001.png](#)

---

Good afternoon,

I am writing in reference to the story Sir John Swan wrote, and I am in agreeance with him that this plan is not in the best interest of Bermuda. It seems as though they would prefer profits for themselves over the clean/cheaper energy that the country needs. They have had many years of profits on this island, and they had plenty of time to invest in their plant, but they haven't. Someone in Government needs to step up and look out for Bermuda first.

Enjoy the rest of your day!



**Jaja Millett**  
*Food & Beverage, Function Manager*  
**Royal Bermuda Yacht Club**  
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a: 15 Point Pleasant Road, Hamilton, HM 11  
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w: [www.rbyc.bm](http://www.rbyc.bm)

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*James Codrington*  
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*Bermuda*  
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*codringtonj@gmail.com*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*November 23, 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

*James Codrington*

**From:** [Jason Saints](#)  
**To:** [Electricity](#)  
**Subject:** Support for Bermuda Better Energy Plan  
**Date:** Tuesday, November 20, 2018 7:55:33 PM

---

Good Day,

I would like to make it known that I support the Bermuda Better Energy Plan and express hope that the RAB rejects the BELCO plan.

Kind Regards,

Jason Saints  
441-599-1126

Sent from my iPad

Jay Riihiluoma  
Ha' Penny House  
22 Scaur Lane  
Sandys, MA 06  
441 505 5297  
Jay@upwindsports.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

15 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

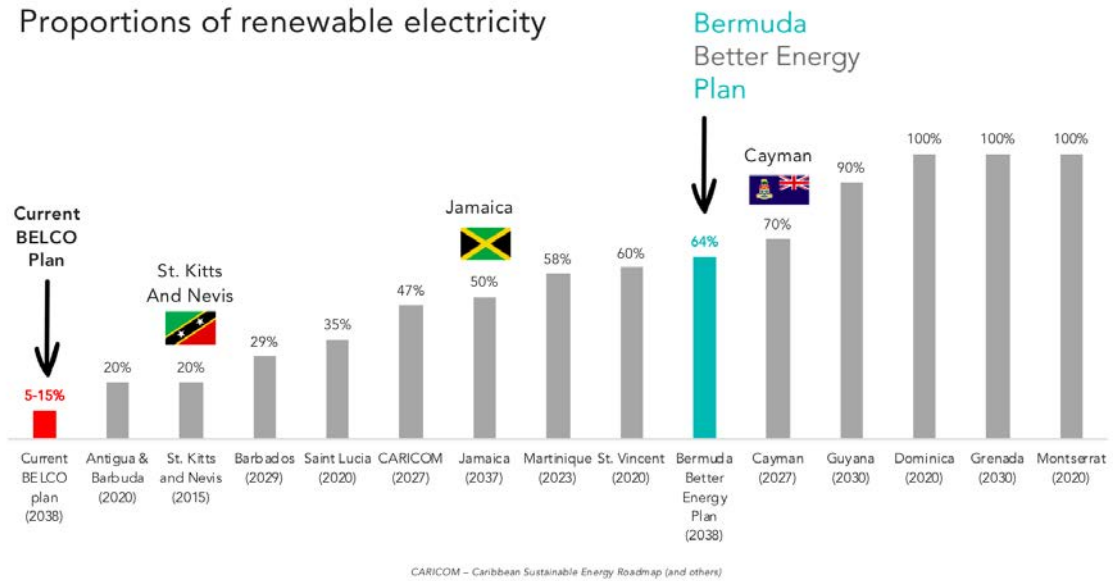
Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- This plan is in keeping with the direction that fellow island nations are planning for their future energy production. Please see the graph below to see how we place ourselves with the BELCO plan vs. The BBEP in 20 years.

## Proportions of renewable electricity



Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Jay Rihiluoma

Iola Brunson-Rocker  
6 WEstdale Lane  
Southampton East  
WK01  
Tel 517-7831  
ibrunsonrocker@yahoo.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

23 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

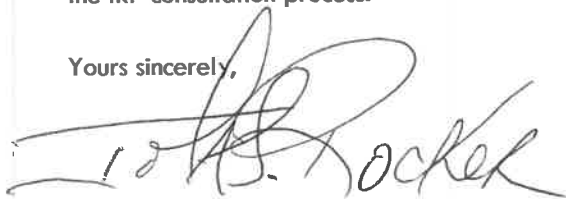
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- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *Renewable Energy is beneficial for health reasons, it is sourced locally and free.*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Iola Brunson-Rocker', written over a horizontal line.

Nadia Famous  
26 North Shore Road  
Pembroke  
Hm04  
Bermuda  
599-0043  
nwagmac@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

23 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

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- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *Long term renewable energy sources are the most viable option*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Nadia Famous', written over a dotted line.

*Jennifer Lightbourne*  
16 Forest Hill Drive  
Warwick  
WKO8  
Bermuda  
+1441 7772477  
*Jenlightbourne@gmail.com*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*23 November 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

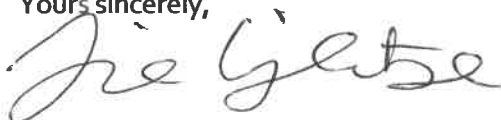
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- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- BELCO's dependence on fossil fuels means Bermuda is completely dependent on other countries for their fuel source. Personally I would feel more secure if Bermuda invested in renewable sources. Especially when plentiful free fuel sources are available in Bermuda in the form of solar and wind. We need to look in to the future; fossil fuel is a short term solution.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



*Jennifer Lightbourne*



Response to Consultation Document: Comments on IRP Bulk Generation Proposals

Name: Gillian (Jill) Bosch de Noya  
Address: #2, 27 Mt. Wyndham Drive  
Bailey's Bay CR04  
  
Phone: 236-4658 / 799 3634  
  
Email: [jboschdenoya@gmail.com](mailto:jboschdenoya@gmail.com)

Dear Sirs,

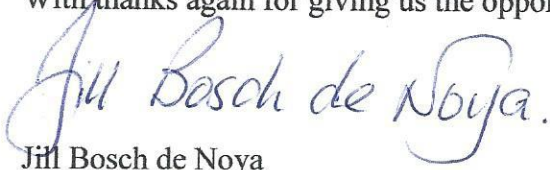
First of all, I would like to thank you for giving us the opportunity to participate in the vitally important issue of electricity supply for the next 20 years.

I am writing because I feel very strongly that the alternative plan put forward by the Better Energy Plan has great merit for the following reasons:

- a) It does not exclude Belco to whom we owe a debt of gratitude for providing electricity to the island for so many years
- b) It reduces our dependence on imported fuels which in turn reduces the outflow of funds to overseas suppliers whose prices fluctuate wildly, prices over which we have no control whatsoever.
- c) It proposes to use sun and wind which are both free, abundant and renewable on a daily basis and are being used successfully in other jurisdictions.
- d) The new technology will provide new and interesting long-term employment for Bermudians who want to pursue a career in energy production and the maintenance of the solar panels and wind turbines.
- e) It will eliminate the need to build a plant for the storage of LNG which would be expensive and potentially dangerous.

As a concrete example of the successful use of wind turbines I can cite the wind turbine that Bacardi installed at their production plant in Cataño in Puerto Rico. This one device has supplied all the electricity required to power their large Visitor Centre and has considerably reduced their energy costs. As a result of this successful implementation other companies in Puerto Rico have also installed wind turbines.

With thanks again for giving us the opportunity to share our views and kind regards,

  
Jill Bosch de Noya

*Justin Willmott*  
*1 Lemon Grove Road*  
*Hamilton Parish*  
*CR01*  
*United Kingdom*  
*526 6154*  
*Justin.s.willmott@gmail.com*

Monique Lister  
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1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*20<sup>th</sup> November 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Will reduce the amount of toxic and harmful emissions that are produced by the current BELCO plant.
- Can be readily financed at competitive rates given the global demand for renewable energy assets by institutional investors.
- Will result in a more resilient electricity generation infrastructure in the face of hurricanes and the like, by reducing our reliance on a centralised generation asset as well as the supply chain interruption risk associated with imported fuels.
- Will enable an energy future of which our children and grandchildren can be proud.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

*Justin S. Willmott*



**From:** [Karen Smith](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 5:56:47 PM

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To the Regulatory Authority of Bermuda,

I am writing to voice my support for Bermuda's future energy strategy to be that articulated in the Bermuda Better Energy Plan. My main reasons for supporting this plan are these:

1. Belco is a for profit business and thus the board must pursue the most profitable future for the company. Investing in renewable energy will compromise this objective and you need to look no further than their current business strategy to see evidence of this. The commercial electricity rates get cheaper as you spend more, the opposite of homeowners. This makes solar utterly unfeasible from a financial perspective to commercial building owners.
2. Financial Independence. We need to uncouple our own economic well being from the world market for fossil fuels. Renewables have a predictable maintenance and installation cost.
3. The environment.
4. Status among other countries. Accepting Belco's plan moves us in the opposite direction to the rest of the world. Following the path articulated in the Bermuda Better Energy Plan provides us with an opportunity to be a leader in the planet's future. The Belco Plan could compromise our business and tourism sectors.
5. Seriously reducing our dependence on fossil fuels is achievable. We are a small country. Given the commitment of Government and our people, we can do this.

Respectfully submitted,  
Karen E Smith

**From:** [karsten karsten](#)  
**To:** [Electricity](#)  
**Subject:** Renew clean energy  
**Date:** Tuesday, November 20, 2018 6:45:22 PM

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I believe its not an option for clean energy. We all want our children, grandchildren and great grandchildren to see our beautiful Island healthy ..just as they see the planet..We need to do our part for the whole of a healthy sustainable future. I believe money worries and costs of new energy needs to not be an issue and greed gets up no where except wanting more and more ..consuming more and more till we are left having to wear masks to breathe..starvation and polluted oceans that are dead. I beg of you to please dont look at the present..look at are future..Do you want one for your loved ones or do you simply not care?

**From:** [Katie Matcham](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 11:46:45 PM

---

Please note my support for the *Bermuda Better Energy Plan*

Sent from my iPhone

Katrina C Carr  
3 Oleander Square  
Devonshire DV 07  
Bermuda  
m. 595-2277  
katrina.flath@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

20 November 2018

**Re: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I have evaluated the two proposals put forward to the Regulatory Authority and would like to express my robust and unequivocal support the Bermuda Better Energy Plan submitted by BE Solar (the "BBEP").

I robustly support the BBEP as this:

- Moves our country away from an unhealthy dependence on commodity prices outside of our control.
- Factors in future generations of Bermudians by looking for cleaner means of generating electricity.
- Diversifies reliance for energy generation away from our single utility model.
- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity.
- The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Appears to have been developed using detailed and transparent assumptions and methodologies and based on actual case studies and inputs from other jurisdictions that are moving in a progressive and environmentally sustainable direction.
- Is in line with the United Nations Sustainable Development Goal No.7 – targeting the move to more affordable and cleaner energy by 2030.

Thank you for your time in reviewing my response, please feel free to contact me directly any time if you would like to discuss my views as they related to the consultation documents, consultation more generally and or the outcome thereof . Please do take into consideration the above when making a decision on the IRP Bulk Generation Proposals before the Authority.

Yours sincerely,

Katrina C Carr

**From:** [rockrisker@gmail.com](mailto:rockrisker@gmail.com)  
**To:** [Electricity](#)  
**Subject:** Energy Plan  
**Date:** Wednesday, November 21, 2018 8:54:20 AM

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I support the Bermuda Better Energy Plan, and I am opposed to the BELCO plan.

Also, why is BELCO allowed to pass on changes in fuel costs to the consumer on a month-by-month basis? When I lived in the US, each year I could choose to contract for a year for electricity from the power company of my choice according to their stated price per KWH which would then remain constant for the year. If the fuel prices went up, I gained, if they went down, the company gained. The present state of affairs with BELCO presents no incentive for them to minimize their fuel costs. A cynic would say that it maximizes their incentive for some sort of tricky under the table payments/kickbacks from the suppliers.

Keith Chiappa  
Spanish Point

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan (BBEP) submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

The principle of what has been explored through the BBEP is undisputedly the most progressive option to satisfy future energy demands within Bermuda. Renewable energy is now firmly established as the future for energy production and there are numerous pieces of research throughout the world which evidence that it is now a technically sophisticated and a reliable method of energy production. When you put into context that the infrastructure associated with renewable energy has advanced exponentially in recent years and the fact that there are vast natural resources within Bermuda, it is frustratingly obvious that this is the option which would be best suited to secure Bermuda's future energy demands.

The powers that be have the opportunity to create a legacy for Bermuda instead of focussing on short term solutions to a long-term problem. Regardless of what happens with this plan, renewable energy is the future and I strongly believe that Bermuda would fall behind other countries, not only in terms of its carbon footprint, but also in terms of how Bermuda is viewed from the outside looking in. Bermuda is obviously an attractive location for international business and the economic health of the country is heavily reliant upon such businesses. If Bermuda does not begin to address some of the environmental disasters taking place on the island (fossil fuel reliance being one), it will become increasingly less appealing for such businesses to establish themselves in Bermuda. The renewable energy generation comparison across the Caribbean shows Bermuda massively lagging behind other countries and it is time to address this.



There seems an endless list of reasons as to why BBEP should be pursued including cost of living, creating jobs in a growing industry and therefore further diversifying the economy, as well as the need for Bermuda to become self-sustaining in the face of an increasingly volatile political landscape in the countries with which Bermuda does business. One of the most crucial points to bear in mind is the fact that the BBEP seeks to utilise the services of BELCO in order to distribute renewable energy, thus continuing to protect jobs at BELCO. The decision should therefore not be made simply on the basis that it's easier and less hassle to change the status quo. Now is the time to change and it is so important that this opportunity is not lost.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process and hope at the very least, that you will engage with those responsible for preparing the BBEP to fully understand the feasibility of what is being proposed.

Yours sincerely,

Kenny Campbell

**From:** [Kian\\_Wookey@jltgroup.bm](mailto:Kian_Wookey@jltgroup.bm)  
**To:** [Electricity](#)  
**Subject:** Energy future  
**Date:** Tuesday, November 20, 2018 12:12:16 PM

---

Good Day,

I support the Bermuda Better Energy Plan for a cleaner, more cost effective and sustainable future for our island

Thank you very much

Kian Wookey

**Kian Wookey | Senior Partner | JLT Specialty Bermuda**

Cedar House | 41 Cedar Avenue | Hamilton HM 12 | Bermuda

Tel: 441 292 4364 | DD: 441 294 4534 | Mob: 441 536 4534 | Fax: 441 292 4496

[kian\\_wookey@jltgroup.bm](mailto:kian_wookey@jltgroup.bm) | [www.jltspecialty.com](http://www.jltspecialty.com)

*JLT Specialty Bermuda is a division of JLT Bermuda Ltd.*

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**From:** [Kim Perdikou](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 4:09:20 PM

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Dear Sir/Madam

AS a Belco customer at 28 Harbour Drive, Hamilton Parish HS 02 - Please accept our formal support for the “Bermuda Better Energy Plan” to replace the current Belco Plan so that Bermuda energy may:

- Transition to 70% renewable energy by 2038
- Reduce the capital expenditure for continued maximizing fossil fuel investments
- Create local jobs
- Remove some of our reliance on others outside Bermuda for fuel costs and impact of fluctuations
- Be environmentally responsible for the next generation of Bermudians

Please add our voices to the Bermuda Better Energy Plan as we will encourage our community to do.

Regards  
Harris & Kim Perdikou

Leanne Alami-Merrouni  
3 Kilderry Lane  
Smiths  
FL 02  
Bermuda  
236 4612  
[leannealami@gmail.com](mailto:leannealami@gmail.com)

16 November 2018

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Provides an alternative instead of simply perpetuating the current problematic model.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



Leanne Alami-Merrouni

Linda Cook linda.cook@me.com  
53 south shore road  
Warwick  
Bermuda  
7042665

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

17<sup>th</sup> Nov 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Bermuda has a chance to have 64% of renewable energy. I urge you for the future of all Bermudian children. If we don't help reduce fossil fuel consumption. We are making global warming a faster and more certain reality that they will have to face. I want my children to feel proud of their nationality and island. Make Bermuda a leader in the world, rather than supporting the existing course proposed by Belco, which doesn't take advantage of cheaper new renewable energy sources.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Linda Cook, Ruby Cook Age 6, Holly Cook age 3.

**From:** [Linda Cox](#)  
**To:** [Electricity](#)  
**Cc:** [Jonathan Cox](#); [Stephen Cox](#)  
**Subject:** Better Bermuda Energy Plan  
**Date:** Saturday, November 24, 2018 8:34:23 PM

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Good day Regulatory Commissioners,

I am a Bermudian with two children (copied). Each and every month I pay my horrendous Belco bill as we need electricity to live a normal life. The cost of electricity ranks as one of the highest in my monthly expenses. We (BERMUDA) need to do better than continuing to support the BELCO Plan 2018 and I completely agree with Sir John Swan and his statement in the Royal Gazette on November 20, 2018. Why are we going down the same road? We need to ween away from this type of energy and the burdensome investment cost proposed by BELCO.

It's time Bermuda was open to new / renewable energy sources. Bermuda is fortunate to be in the middle of the ocean where sun and wind are a commodity. Let's use both to our advantage! The rest of the world is evolving and we must do so to. I fully support the Bermuda Better Energy Plan.

On behalf of myself and my family we implore you to explore the recommendations made in the Bermuda Better Energy Plan.

Thank you for doing the "right thing" for future Bermuda generations.

Linda Cox

Linda Wilkinson Tucker  
17 Tankfield Hill  
Paget PG06  
email: [linda@thehousebermuda.com](mailto:linda@thehousebermuda.com)  
phone: 535 7098

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

BY email to : electricity@RAB.bm

26 November 2018

Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

1. Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity.
2. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
3. Uses technology that is in commercial use in other jurisdictions.
4. Has been developed using detailed and transparent assumptions and methodologies.
5. Is the most efficient and sustainable solution for Bermuda's energy security, as it takes advantages of our Island's FREE natural resources.

Thank you for your time in reviewing my response, and I would kindly request written confirmation that it has been received.

And I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

  
Linda Wilkinson Tucker

Lisa Mallon  
39 Harrington Sound Road,  
CR04  
Bermuda  
[lisamallon@me.com](mailto:lisamallon@me.com)  
Tel : 293-5924

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

25<sup>th</sup> November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Global warming is real and we need to act now and not wait 20 years to reduce our carbon footprint. Bermuda is ideally placed to generate so much more of its own power from renewable sources.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process

Yours sincerely,

A handwritten signature in black ink that reads "Lisa Mallon". The signature is written in a cursive, flowing style.

Lisa Mallon



Lizzie Gibbons  
Langport Cottage  
3 Crow Lane  
Pembroke  
HM 19  
441 535 0195  
Lizzie2904@live.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

22<sup>nd</sup> November, 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- I would hope that this proposal would also bring down the cost of electricity along with being kinder to the environment.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,  
Hannover Life Re Bermuda Ltd.



Lizzie Gibbons  
Office Manager & Compliance Assistant

Lorissa Snaith

23A Scott's Hill Road  
Somerset, MA05  
533-3444  
cam@bleeker.co

November 23, 2018

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

**I support the Bermuda Better Energy Plan submitted by BE Solar**, as this plan:

- Is the most consistent with the purposes of the Electricity Act and the ministerial direction for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilizing energy costs through clean, renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Is the right thing to do. Fossil fuels are **not** the future. sustainable energy is. We need to give our children and our children's children a future.

Thank you for your time in reviewing my response. I look forward to learning of the final outcome of the IRP consultation process.

Sincerely yours,

Lorissa Snaith

Lynn Petty  
3 Cedars Drive  
Paget  
PG 02  
Bermuda  
236 1727  
lynndelia@yahoo.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

17<sup>th</sup> November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- It is up to our generation to keep Bermuda beautiful for our children and future generations

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Lynn Petty

**From:** [Lynne C Matcham](#)  
**To:** [Electricity](#)  
**Subject:** I support the Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 2:05:54 PM

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Simply put, I write in support of the *Bermuda Better Energy Plan* and as a Bermudian am completely against the reliance on fossil fuels both for Bermuda and globally. Renewable energy is the only way to go for the future. The BELCO plan is irresponsible and out of step with the rest of the world's commitment to reducing the use of fossil fuels.

Lynne Matcham  
Southampton  
238-0904

Macy Aicardi  
5 Bridge Lane  
Sandys  
SB01  
Bermuda  
517-8005

[aicardi.macy@hotmail.com](mailto:aicardi.macy@hotmail.com)

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

22 November 2018

Dear Ms. Lister,

I am writing a response in support of the Bermuda Better Energy Plan.

Bermuda no longer needs to contribute to the global climate crisis. When people ask how an individual makes a difference, I respond with 'wouldn't you rather not be a part of the problem than a part of it,' and this is the outlook people need to have on the Bermuda Better Energy (BBE) Integrated Resource Plan.

BELCO is a private company and must produce profits for its share holders. I am grateful that BELCO has been a reliable supplier of energy for locals, however they have been unregulated for many years acting as a monopoly making huge profits while polluting our air and charging expensive prices for electricity. The world can no longer support energy supply from the burning of fossil fuels, with an article published just today about how gas concentrations have reached a record high. It reports that 2017 showed a continued 'rise in the concentration of CO<sub>2</sub>,' and that levels are, 'now 46% greater than the levels in the atmosphere before the industrial revolution.' The WMO Deputy Secretary-General Elena Manaenkova stated that, 'Every fraction of a degree of global warming matters, and so does every part per million of greenhouse gases.' (BBC, 2018) Bermuda's choice of energy production matters.

The BBE plan dramatically reduces our greenhouse gas emissions. There are many assumptions that come with renewable energy including costs and, in our case, job losses. Renewable energy projects have high capital costs, but have much lower operational costs, due to a lack of moving parts (particularly solar) and zero fuel costs unlike fossil fuel energy. Figure 13 of the BBE plan, shows the levelized costs of each generation technology in 2022, where bulk solar is the least costly energy source. Fuel Oil and LNG are the most expensive, once all variables are considered, despite popular belief. Renewables have stable costs while fuel prices are volatile, and will become more so as fossil fuels become more finite. It is clear the BBE plan is in line with provisions set out by the 2016 Electricity Act, as it promotes cleaner energy sources, encourages the efficient use of electricity and the sustainability and reliability of electricity supply. (Bermuda Electricity Act 2016, 2016) BELCO will still need employees

to run their newer, more efficient engines and unemployment could decrease as workers are needed to install and do maintenance on the renewable energy projects. Locals will be trained, learning skills that will be more useful to them as the field of renewable energy continues to grow globally, unlike fossil fuel industries.

Furthermore, the BBE plan ensures the integration of renewable energy, diversifying our energy resources. Bermuda is extremely dependent on imports and there is the issue of energy security, which the BBE plan considers as it purposefully integrates waste to energy, distributed solar, bulk solar, offshore wind and fossil fuels (LPG).

One of the suggestions of the BBE plan is offshore wind turbines. There is concern of damage to the marine environment. The harsh reality is that none of the marine life will exist if the world does not start investing in technologies such as wind turbines. People may be upset by the look of them, however having the turbines offshore will mitigate this issue and the specific location off Dockyard (if this is to be followed through) means not as many homes will be impacted as they would be otherwise, and the proximity makes maintenance less costly. This reasoning also applies to solar panels as there is concern that if the panels are placed on many houses, we might start to distort the traditional image of Bermuda homes. My response is that not all homes are effective for panels and that panels/turbines are signs of economic development and openness to change which is incredibly beneficial for the image of our country, increasing our global competitiveness. Bermuda has not always been positively highlighted in the news for open mindedness, so this is an opportunity to change that as the plan acts as the start to developing a new image for Bermuda. There is also the possibility, with rapid developments in solar technology and architecture, to have white solar panels to suit our rooves, which could be unique to Bermuda. The BBE project will act as a time for the community to come together.

Moving forward, the biggest concern with bulk solar energy is space. Distributed solar energy is already seen across the island but in terms of bulk solar energy, Bermuda has sites where the land neither needs protecting for environmental reasons or is being productive such as around the airport, Cooper's Island water catchment areas, or the previous America's Cup docks. We could also consider space on tops of warehouses in industrial areas. There is clearly a profit to be made in bulk solar energy, shown by the solar farm development on the airport finger.

Now, with the chance that the BBE plan is not chosen, I still believe it is important for the Regulatory Authority (RA) to consider ways wind power could be implemented in the future, since it seems so wasteful to not harvest this natural resource. In Rhode Island, they have constructed what is seen as a demonstration project for turbines. They chose to start with a small, manageable project for the small island, Block Island. The BBE plan could be adjusted to start small, and then grow once the support and investment are available. Unfortunately, we are running out of time, according to the IPCC report, with just 12 years to keep our temperature below a rise of 1.5 degrees Celsius (The Guardian, 2018), which is why I believe the BBE plan will be effective in encouraging action to be taken quickly. Moreover, codes for building fabrics must also be

implemented to increase efficiency, whether the plan goes through or not. The BBE plan is not just about sourcing our energy differently, it is also about using it in the most efficient way possible.

It is astonishing to comprehend that BELCO believes their plan will allow Bermuda to be 'well positioned to compete in the international business and global tourism markets.' (Bermuda Electricity Act 2016, 2016). Bermuda will be incredibly behind other Caribbean countries in terms of renewable energy by 2038 and this is especially concerning given our wealth. Growing up in Bermuda, sustainability has never been at the forefront of governmental issues because we are not exposed to the problems on our front doors. Climate change truly is the most pressing issue of our time as, if the predicted impacts do occur, no other issue will matter when we can not survive on earth. In this time of incredible technological developments, the field of energy production is always going to be difficult to predict and navigate, so it is down to which plan is, the best decision in hopes of gaining better energy security, better for the environment and ultimately the best for Bermudians. The fear of how Bermuda will be impacted by climate change should drive us to make better decisions for the environment. It is in the country's best interest to mitigate the impacts of climate change by choosing the plan which significantly reduces greenhouse gas emissions and damage to the environment, the BBE plan. It is also the mandate of the RA to recognize the efforts made by many local companies and individuals, including BESolar and Greenrock in financing a new plan, as it is clear locals want to see more renewable energy in the future than is proposed by BELCO. As an 18 year old, I am limited in my technical knowledge to make recommendations for modifications to what has been suggested by the plans, however as a young Bermudian who is enthusiastic about the environment, I am proud to see the Bermuda Better Energy plan which truly is a huge step in the right direction and a sign of hope for our beautiful island. I only wish I had more words to show you how important this decision is to me.

Thank you,

Macy Aicardi

*Maja Felicia Bendtsen  
Ahlegaardsvejen 4  
Roenne, Bornholm  
DK-3700  
Denmark  
+45 6177 4995  
Maja.felicia.bendtsen@gmail.com*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*22 November 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I grew up on the Danish island of Bornholm, which lay secluded in the Baltic Sea. The island is known for its beautiful nature and already in the mid-80s islanders began to consider, how they could help preserve the nature and at the same time reduce the cost for fossil energy from external source and instead use local renewable energy and improve the economy. The work continued and approx. 20 years later it resulted in the Bright Green Island strategy plan stating that Bornholm wants to be 100% renewable by 2025. It is an ambitious target, and it will not be easy to succeed, but still we are striving to meet the goal.

I was first acquainted with Bermuda in 2009, when a delegation from Bermuda visited the Bornholm power utility, where I worked at the time. The purpose of the visit was to get inspiration to how an island community can work towards renewable energy and a more sustainable future. Later that same year I was so fortunate to visit Bermuda together with my family and I have visited twice more since then.

One of the things I have admired when visiting, besides the fantastic nature and beautiful sceneries, is the ingenuity of early settlers. The resourcefulness of using white roofs to keep the houses cooled down and at the same time using the roofs for collecting rainwater for drinking water is for me an example of sustainable thinking. However, looking at the greyish roofs of houses in the vicinity of the BELCO power plant in Hamilton shows to me that using fossil energy is not sustainable, both because of the CO<sub>2</sub> emission, but certainly also because of emission of harmful particles.

Therefore, I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses well-known technology that is in commercial use in other countries.
- Is necessary to create a sustainable energy supply for Bermuda. Sustainable because it will make Bermuda less dependent on external and fossil energy sources and reduce harmful emissions, which will be a benefit for all islanders.



Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

*Maja Felicia Bendtsen*

4 Littleholme Lane  
Southampton  
SN 02  
Bermuda  
441 535 8450  
mcwfitbda@yahoo.com

24th November, 2018

Ms Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

Dear Ms Lister,

**Re: Response to Consultation Document - Comments on IRP Bulk Generation Proposals**


I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Will bring Bermuda more in line with other island nations (such as Guadeloupe, Martinique and Barbados in the Caribbean and several islands in the Pacific) in playing a leading role in renewable energy and will show everyone that steps are being taken to protect our precious environment for future generations. The Renewable Energy Capacity Report 2018 from IRENA (The International Renewable Energy Agency) gives a breakdown of each country's renewable energy sources and the percentage use of each source.
- Will help Bermuda reduce its carbon emissions and thus reduce its impact on climate change which is important when considering, for example, a possible rise in sea level and how that would negatively affect the island. In 2017, the World Meteorological Organisation (WMO) said that the CO2 levels in the atmosphere had reached 405 ppm, a level not seen in 3-5 million years and this CO2 concentration is 146% greater than pre industrial revolution levels. It is absolutely imperative that all countries throughout the world do everything they can to reduce carbon emissions to stop the levels rising even further otherwise there will be catastrophic consequences.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

  
Margaret C Weale

**From:** [Margot Cooper](#)  
**To:** [Electricity](#)  
**Subject:** Current Proposals for BELCO  
**Date:** Friday, November 23, 2018 1:53:41 PM

---

November 23, 2018

Ms. Monique Lister  
Regulatory Authority  
Craig Appin House, 8 Wesley Street  
Hamilton

Dear Ms.Lister:

I am writing to you to express my support for the Bermuda Better Energy Plan.

I feel strongly that it is important for Bermuda that we decrease your dependence on fossil fuel and increase the use of renewable energy such as solar and wind power. I believe that this is where the future lies and that this is the direction in which we must move.

With best wishes,

Margot M.Cooper

61 Cedar Hill, Warwick 06  
telephone 236-5664

**From:** [Marilyn Stines Sannemalm](#)  
**To:** [Electricity](#)  
**Subject:** No More Fossil Fuels!!!  
**Date:** Tuesday, November 20, 2018 12:26:12 PM

---

Please, think of the ecology of the world, and the extreme expense factor for us Bermudians...don't proceed with more fossil fuels.  
We need a better, more economical way for us all living on this tiny island!

Thank you for listening.

Marilyn Sannemalm  
St George's

--

*Wishing you love, peace, understanding and forgiveness.*

**From:** [Mark Henderson](#)  
**To:** [Electricity](#)  
**Subject:** "Response to Consultation Document: Comments on IRP Bulk Generation Proposals"  
**Date:** Thursday, November 22, 2018 12:15:00 PM

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Mark Anthony Henderson  
Home:234-3651 Cell: 332-1644  
74 Railway Trail, Sandys, Bermuda MA06

Honestly,

This plan makes sense. Yes, it will be hard.

Rome was not built in a day and neither will this be.

Why rely on fuels so redundant? Once they're gone they're gone.

These methods will create jobs as well-which so many people are still looking for.

This is the future. Stop denying it.

It's time to make a difference and ignore our egos-take our heads out of the sand.

This is right now.

Please, before it's too late.

Why wouldn't we want to be more efficient?

Why wouldn't we want to turn the tides of our daunting end?; were we not to make changes now... things will only get worse. And that is what everyone is dredging.

Get [Outlook for iOS](#)

**From:** [maryff@ibl.bm](mailto:maryff@ibl.bm)  
**To:** [Electricity](#)  
**Subject:** Better Bermuda Energy Plan  
**Date:** Tuesday, November 20, 2018 1:51:56 PM

---

This is my choice out of the two options

M. Faries

Sent from my BlackBerry 10 smartphone.

Springfield, 43 My Lords Bay Lane  
Hamilton Parish CR02  
441 293 0491  
martinboltini@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

21st November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- We need to move away from the use of fossil fuels as fast as we can.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Martin A Bolton', with a long horizontal flourish extending to the right.

Martin A Bolton MICE P Eng.

*Dr Martin Counsell  
10 Devonshire Bay Rd  
Devonshire  
DV 07  
Bermuda  
297-1305  
martin\_counsell@yahoo.co.uk*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*17 November 2018*

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

The Paris Climate agreement of 2015 attempts to address the global threat of increasing green house gas emissions. As of November 2018, 194 states and the European Union have signed the Agreement. Climate change is a profound global threat and as such Bermuda will not go unscathed. The most incontrovertible effects will be sea level rise and the warming and acidification of the oceans. Sea level rise will lead to extraordinarily expensive measures to protect low lying areas of Bermuda. The likelihood of more frequent and more powerful hurricanes is sobering and the associated acidification of the oceans will stress our reef ecology. ('Global Warming and Hurricanes: An Overview of Current Research Results' Sept. 20, 2018. Geophysical Fluid Dynamics Laboratory – National Oceanic and Atmospheric Administration NOAA). This only addresses our own parochial issues. The threat for many other Small Island States will be existential. The effects on the planet as a whole will be devastating.



Some would argue that we have a moral obligation to do what we can to protect the planet and all its diverse species for future generations as are so many other countries of the world. If a moral obligation is too onerous a consideration for this particular decision then let it be based on the economic logic of prudent expenditures. Bermuda is fortunate in having both solar and wind resources that can be harnessed for the production of renewable and sustainable energy. These are proven technologies that much of the world is embracing at an exponential rate. ('Renewables 2017'. International Energy Agency. 4 Oct 2017). It would be a profound mistake to ignore these renewable opportunities in favour of fossil fuel particularly when the expensive infrastructure necessary for the shipment and storage of this polluting LNG fuel will pre-empt any further attempts to fulfill our aspirations and obligations to reduce green house gases for a considerable period of time.

It is of course reasonable for BELCO to think in fossil fuel terms. It has always done so. The leadership required will have to be found elsewhere. The Electricity Act 2016 set a framework for that leadership. It should not be necessary to have to print out the "purposes of the Act" but the intent of the Act has so egregiously been forgotten by the BELCO proposal as to make it necessary.

#### **Purposes of this Act**

6 The purposes of this Act include the following, namely, to seek—

- (a) to ensure the adequacy, safety, sustainability and reliability of electricity supply in Bermuda so that Bermuda continues to be well positioned to compete in the international business and global tourism markets;
- (b) to encourage electricity conservation and the efficient use of electricity;
- (c) to promote the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources;
- (d) to provide sectoral participants and end-users with non-discriminatory interconnection to transmission and distribution systems;
- (e) to protect the interests of end-users with respect to prices and affordability, and the adequacy, reliability and quality of electricity service;
- (f) to promote economic efficiency and sustainability in the generation, transmission, distribution and sale of electricity.

Clause (c) is particularly neglected in BELCO's proposal.

Clause (d) is not addressed. BELCO is an indispensable player in Bermuda's energy sector. However, by not considering the importance of differentiating between the generation and transmission of electricity, the status quo is maintained and the diversification and development of renewable sources is stymied by a monopolistic gatekeeper.

This is a once-in-a-generation opportunity to show vision and leadership and to honour the spirit of our own Electricity Act by implementing the Better Energy Plan. It meets all the purposes from (a) to (f). Of course the intermittency of renewable sources necessitates the continued use of fossil fuels. This is addressed by the Plan. Hopefully this too will diminish over time as better storage options are developed at lower prices. This also is happening at

an exponential rate. (See [Tesla's giant battery in Australia](#). [Fred Lambert](#). Electrek. Jan. 23rd 2018). If the BELCO plan is approved we are admitting that 15.8% renewable energy is the best we can do for decades to come. What an embarrassing figure that will be to defend in the future when the decisions that led to the spurning of these established renewable technologies were taken in 2018. We must do better than that.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

*Martin Counsell*

**From:** [Martina Harris](#)  
**To:** [Electricity](#)  
**Subject:** IRP response  
**Date:** Tuesday, November 20, 2018 7:57:27 AM

---

To whom it may concern

I have been to presentations and have also independently reviewed the proposals by BELCO and the Better Energy Plan.

I wish to convey to the Regulatory Authority that the steps suggested by the Better Energy Plan are of far greater benefit to all in Bermuda for the following reasons:

- \* we will much more significantly minimize our exposure to inflationary fossil fuel prices
  - \* the cost of electricity will fall
  - \* over time we will quite significantly reduce our payments off island and therefore our balance of payments will improve
  - \* the diversification of energy sources makes a great amount of sense
  - \* our environment and therefore public health will greatly improve from harnessing a greater percentage of energy from renewables
- BELCO will pick up in the area of electric vehicles' necessity for charging and managing the grid.

We must take the most progressive steps as we have done nothing thus far. The time has come and we are fortunate to have the insights of the Better Energy Plan to chart our course. Let's not waste time or good advice.

Kindly confirm receipt of this submission and advise me if you require anything additional.

Regards

Martina Harris

**RED BARRACKS  
12 SPEAKER'S DRIVE  
ST. GEORGE GE 02  
BERMUDA**

Regulatory Authority  
(IRP Response)  
1<sup>st</sup> Floor Craig Appin House  
8 Wesley Street  
Hamilton

Sunday, 25<sup>th</sup> November, 2018

Dear Sirs,

Integrated Resource Plan Consultation (IRP)

I am writing to you as both a shareholder of BELCO and as an owner of an SSRG in St. George (a 13kW solar array, shortly to be increased to 15kW).

Whilst investing in alternative energy remains an expensive option and under current circumstances is limited to those with the requisite financial means, in the longer terms there are very apparent benefits.

My electricity charges ran around \$11,000 a year 6 years ago. I reduced that level of charge to:

- (i) approximately \$8,000 a year by:
  - introducing LED lightbulbs as a replacement for halogen bulbs;
  - ceasing use of a clothes dryer in favour of sun and wind power – a washing line
  - increasing the temperature on my air-conditioning to 75 degrees; and
- (ii) approximately \$2,500 a year (and it would be lower but for tourist- tenants in the summer who use a lot of power carelessly) by installing a 13kW solar array. The annual costs were lower for the years 2014-2017 until you altered the tariff paid to us by BELC) for the power sent to them from my SSRG

It, therefore, appears that I have reduced my carbon footprint by about \$8,500 plus a year. In addition, I now operate an all-electric car (again a heavy capital cost compared with gas powered cars). This has reduced my gas purchases by \$2,000 a year (although it may have accounted for an increase in electricity use)

This is cited to show that a **change of mindset** and the **application of resources (capital)** can bring about change.

I have studied the various (serious) opinion pieces appearing in the media in relation to the IRP, in particular the opinion pieces by:

- A Significant Milestone in our History- Denis Pimentel , President of BELCO
- Ten days to make our voices heard on the future of Bermuda's energy- Sir John Swan and Mike Murphy 20<sup>th</sup> November, 2018
- Report: on The BE Solar and Greenrock community meeting-RG Glenn Fubler 14th Nov. 2018
- Best practice for our energy future- Nick Hutchings 15 Nov 2018
- Our Energy future could pay dividends for Bermudians- Connor Burns 19th November 2018



- Warnings to heed from those who should know- Nick Hutchings RG 22<sup>nd</sup> November, 2018

and, without being able to express a learned opinion on the intricate details of each of BESS and BELCO Plans, what I do see is major difference in **mind-set**:

- (i) the BESS Plan is
  - open minded and progressive
  - recognizing the need for a clean energy plan for the long term and the time is to start now
  - in tandem with current thinking in much of the western world (bar the US administration and coal lobby)
- (ii) the BELCO Plan is:
  - regressive closed-minded historical thinking in *"Signing up for a burdensome investment in another fossil fuel only puts Bermuda further out of step with the world initiatives to switch from fossil fuel to renewable energy."* Sir John Swan and Mike Murphy;
  - placing us at the risk of *"wildly fluctuating fossil-fuel world prices"* (same source) that only sap what limited foreign currency earnings we have when we have to pay those prices for a fuel someone else controls (so far, wind and sun are outside real human control);
  - a self-serving mindset;
  - cites as an example the US predictions for US power generation for the foreseeable future (again regressive thinking and not the best example- in comparison take a look at what European countries are achieving with alternative energy generation and at other small Islands bathed in the sun and wind, rather than winter darkness and huge heating bills)

I recognize that:

- (i) BELCO will need to improve their existing facilities using conventional technology ensure adequate power generation for the immediate future (lack of investment by Ascendant/ BELCO has left Bermuda exposed and "rescue" on came through recession and a major drop in energy demands);
- (ii) Reliance will have to placed on BELCO to continue to supply the bulk of our power- they have the infrastructure and Bermuda may not be well served by having multiple utilities; however, multiple power sources can be harnessed by BELCO and for this they must open their minds and business model- BELCO should learn to work with not against what it perceives as competition rather than allies with a common interest;
- (iii) The BESS Report may be over optimistic (I too have been over-optimistic as to what alternative energy technology can do for us but remain a convert to the concept and will continue to invest in the technology for as long as I can) but it is an open-minded **mindset** (and full marks to BE Solar and Greenrock for commissioning the report)
- (iv) The Government has limited financial resources with many prior and more immediate demands but it needs to open its mind up to the longer term needs for sustainable energy generation (need to go a bit further than "electric busses" but that is a start). Electric cars are expensive and the costs of alternative energy generation prohibitive to many so Government action is needed to move all of us ahead and to make these technologies affordable to more.

You- the Regulator – have a role to play in choosing to recommend a path forward with an open mindset that will encourage the Government AND the people of Bermuda to step forward in a progressive manner- to change our way of thinking. Let us ensure that Bermuda is on the right side of history on this issue.

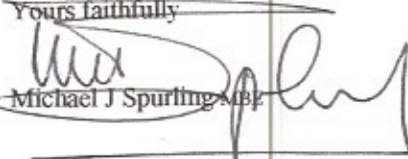
This morning at 08.44 am- high tide- the dock at my home on St. Georges Harbour was 4 inches under water- a regular occurrence these days and a warning to those who deny climate change is all about us. I am realistic enough to recognize that what we do here in Bermuda will not change that much- the rest of the

world needs to join forces on this- but Bermuda can demonstrate it cares enough to effect change on power generation and grasp the following:

*"Bermuda's future energy policy must be set by socially responsible action that attempts to reduce the extremely high cost of electricity and to continue the island's commitment to the public's good health and stable living at affordable prices in step with the world's dramatic movement towards clean energy."*

Thank you Sir John and Mr. Murphy for saying it so clearly. I sincerely hope you can also demonstrate such clarity. I also sincerely hope that BELCO can open up its own thinking to embrace change and work with the community rather than chasing off "the competition".

Yours faithfully

  
Michael J Spurling MBE

**RED BARRACKS  
12 SPEAKER'S DRIVE  
ST.GEORGE GE 02  
BERMUDA**

Regulatory Authority  
(IRP Response)  
1<sup>st</sup> Floor Craig Appin House  
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- (ii) Reliance will have to placed on BELCO to continue to supply the bulk of our power- they have the infrastructure and Bermuda may not be well served by having multiple utilities; however, multiple power sources can be harnessed by BELCO and for this they must open their minds and business model- BELCO should learn to work with not against what it perceives as competition rather than allies with a common interest;
- (iii) The BBEP Report may be over optimistic (I too have been over-optimistic as to what alternative energy technology can do for us but remain a convert to the concept and will continue to invest in the technology for as long as I can) but it is an open-minded **mindset** (and full marks to BE Solar for commissioning the report)
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Thank you Sir John and Mr. Murphy for saying it so clearly. I sincerely hope you can also demonstrate such clarity. I also sincerely hope that BELCO can open up its own thinking to embrace change and work with the community rather than chasing off “the competition”.

Yours faithfully

Michael J Spurling MBE

**From:** [Michele](#)  
**To:** [Electricity](#)  
**Cc:** [Neil Mountford](#)  
**Subject:** Better Energy Plan  
**Date:** Wednesday, November 21, 2018 9:40:50 PM

---

Good Evening,

We wish to confirm our support for the Bermuda Better Energy Plan and in particular the proposal submitted by BE Solar.

Regards,

Michele & Neil Mountford

Sent from my iPhone

Mollie Bigley  
17 Pokiok Crescent  
Smiths  
FL05  
Bermuda  
533-3338  
molliebigley@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

19 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

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- Has been developed using detailed and transparent assumptions and methodologies.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Mollie Bigley

Myra Virgil  
25 Trimingham Hill  
Paget, PG 05  
Bermuda  
441 238 6620  
[marcandmyra@ibl.bm](mailto:marcandmyra@ibl.bm)

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

20 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Addresses my concern and wish that Bermuda develop a more sustainable and potentially affordable option for generating energy
- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
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Yours sincerely,



Myra Virgil

Natalie Chiaramonte  
6 Southcote Rd  
Paget  
PG 04  
1 441 504 0367  
natalieluthi@mac.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

20 November, 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

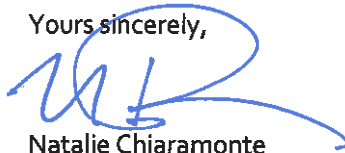
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- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Will bring Bermuda's electricity sources into the 21<sup>st</sup> Century by securing a cleaner, more economical and independent source of energy than fossil fuels. Vulnerability to market prices for diesel, LNG or other fossil fuels will also be more significantly reduced. Who in Bermuda's community is not tired of BELCO's monthly fuel adjustment cost when such costs could be reduced or avoided altogether using more natural resources?

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



Natalie Chiaramonte

Natalie Sannemalm  
Unit 3, 1 Trelawney Lane  
Pembroke, HM06  
Bermuda  
441-521-1502  
Sannemalm@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

21 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

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- Uses technology that is in commercial use in other jurisdictions.
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Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

A handwritten signature in black ink, consisting of a stylized 'N' and 'S' followed by a long horizontal line.

Natalie Sannemalm  
Premier Tickets Limited General Manager

**From:** [Nick Warren](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda's Energy Plan  
**Date:** Tuesday, November 20, 2018 11:01:25 AM

---

I appreciate the opportunity to be able to express my personal opinions on this important issue.

My opinions can be broken down into 5 comments:-

1. Bermuda, despite being one of the most affluent places on the planet, has failed to embrace alternative energy as a country and is decades behind where it could be had it done so. We have proven to be innovators in our international business, I see no reason why we cannot use this 'can do' attitude towards energy generation.
2. The Belco Plan essentially offers nothing but more of the same. Continuing reliance on fossil fuel for energy generation is increasingly expensive, environmentally unfriendly and is contrary to the rest of the world's initiatives to switch where possible to renewable energy.
3. The Better Energy Plan offers a future that is more environmentally friendly and long term appears to be far more cost effective.
4. The decision appears to be between continuing doing what we are doing now or embrace the future. Adoption of the Belco Plan is insanity, where the quote "insanity is repeating the same mistakes and expecting different results" seems appropriate.
5. The adoption of the Better Energy Plan is the only sensible alternative for our country's future.

Thank you.

Nick Warren

Sent from [Mail](#) for Windows 10

**From:** [Nancy Wainwright](#)  
**To:** [Electricity](#)  
**Subject:** Belco future energy plan  
**Date:** Thursday, November 22, 2018 11:44:50 AM

---

Dear Electricity Panel,

I am not in favor of Belco's proposed energy plan for the future. There are several other viable plans that include green resources that are a far better option and choice for Bermuda and the planet that must be considered.

Bermuda has had one energy resource in the past with Belco and it is time for Bermuda to become more current and more responsible with this vital resource.

Please scrap Belco's plan and monopoly for serious consideration of a greener and more cost effective option for our island.

With kind regards,  
Nancy Wainwright

Sent from my iPhone



**From:** [gurret@northrock.bm](mailto:gurret@northrock.bm)  
**To:** [Electricity](#)  
**Cc:** [cchingurret@gmail.com](mailto:cchingurret@gmail.com); [cc901@exeter.ac.uk](mailto:cc901@exeter.ac.uk)  
**Subject:** Subject: Better Bermuda Energy Plan  
**Date:** Thursday, November 22, 2018 10:57:09 AM

---

Good day Regulatory Commissioners,

I am a Bermudian with two children, Christian and Camille. My family have installed solar panels as it is renewable energy and we believe in moving forward with a renewable energy plan not only for our household but for Bermuda. We (BERMUDA) need to do better than continuing to support BELCO and their energy plan which has little to no renewable energy in its plan. It's time Bermuda was open to new / renewable energy sources. The rest of the world is evolving and we must do so to. I fully support the Bermuda Better Energy Plan.

On behalf of myself and my family we implore you to explore the recommendations made in the Bermuda Better Energy Plan.

Thank you for doing the "right thing" for future Bermuda generations.

Nicky Gurret

**From:** [Nicole Amaral](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 6:30:35 PM

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To whom it may concern,

I am e-mailing to express my support of the Bermuda Better Energy Plan. I find it unfathomable that there is even a debate against clean and renewable energy. I believe the Bermuda Better Energy Plan is a step in the right direction and should be supported.

Kind regards,  
Nicole Amaral

Sent from my iPhone

Nicole Haziza  
Pembroke  
Email: nicole.haziza@gmail.com

Monique Lister  
Regulatory Authority  
Hamilton, Bermuda

19 November 2018

BY EMAIL

**RE: IRP Bulk Generation Proposals - Better Energy Plan**

Dear Ms Lister

I am writing to submit a recommendation to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan is the most compliant with the Electricity Act and ministerial directions for the least-cost supply of electricity that is adequate, safe, reliable and sustainable for Bermuda.

The proposed Better Energy Plan promotes the use of cleaner energy sources and technologies. It further promotes the island environmentally, economically and strategically, to enhance Bermuda's reputation in the international business and tourism sectors.

I do not have any personal interests in any of the parties submitting proposals and I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely

Nicole Haziza

**Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Noah Fields  
"Stonycroft"  
1 Fairylands Road  
Pembroke, HM 04

November 22nd, 2018

Regulatory Authority of Bermuda  
1st Floor Craig Appin House,  
8 Wesley Street,  
Hamilton HM11,  
Bermuda

Dear Sir or Madam,

I am writing to you as a concerned citizen regarding the twenty-year energy plan recently put forward by BELCO. As the rest of the world moves forward into a future using cleaner and more affordable renewable energy sources I was alarmed to see that BELCO supports twenty more years of the same... only more expensive(!) as we the people of Bermuda will have to ultimately pay for a new BELCO storage system.

As an island nation I believe we should be motivated by the findings in the 2018 IPCC report on Global Warming of 1.5 degrees C. We are particularly vulnerable to its findings of Climate Change and should be modelling environmentally prudent and conservative action in our energy choices for the next twenty years. On reviewing the Electricity Act 2016 it is disheartening that BELCO does not seem to take much if any of the environmental considerations to heart in their proposal.

Having recently read the Better Bermuda Energy Plan I was impressed to see that it is consistent with the Electricity Act 2016 in many ways including: Sustainability, Safety, Adequacy, Conservation and Efficiency and Affordability.

It is my request that the Regulatory Authority of Bermuda not accept the BELCO plan as a "default" plan for our future, and that more time and creative thought be put into alternatives, including the Better Bermuda Energy Plan before you make this very momentous decision on behalf of your fellow citizens.

Thank you for your consideration.

Sincerely,

Noah Fields  
noah.l.fields@gmail.com  
441 747-9191

Paige Gell  
11 Fairylands Lane  
Pembroke  
HM05  
Bermuda

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

20 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Paige Gell

**From:** [Froud, Pamela](#)  
**To:** [Electricity](#)  
**Cc:** [tfroud@logic.bm](mailto:tfroud@logic.bm)  
**Subject:** We support the Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 5:45:04 PM  
**Attachments:** [image001.png](#)

---

Good day Regulatory Authority of Bermuda ~

The time is now to chart a future clean energy course. Bermuda needs to reduce its dependence on fossil fuels. Bermuda should not sign up for a burdensome investment in LNG. There are no benefits to Bermuda. Our high energy costs hurt the working class Bermudian and discourage new investment and development. Bermuda already pays higher rates for electricity than of comparable jurisdictions. Fossil fuel payments all go outside of Bermuda. Fossil fuels are harmful to the environment. Other comparable locations are far ahead of Bermuda already in transferring energy needs to renewable resources.

On behalf of myself and my family we implore you to explore the recommendations made in the Bermuda Better Energy Plan.  
Thank you for doing the "right thing" for future Bermuda generations.

Best Regards,

*Pam Froud*

Pamela Froud, CPA, CA | Direct: 1-441-294-1573 | Mobile: 1-441-595-2328  
The Swan Building, 26 Victoria Street, Hamilton, HM-12, Bermuda | P.O. Box HM 1429, Hamilton, HM-FX, Bermuda



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Regulatory Authority of Bermuda

To the RAB:

I have been reading up on the proposals for the future of energy provision in Bermuda. I am against any proposal which continues our dependence on fossil fuel – whether it be the current model or the LNG model proposed by Belco. I believe we should aspire to reduce fossil fuels by more than 50% in the next 10-20 years and to me that can be achievable with a combination of wind and solar power.

I am 60 years old and hope to see definite progress towards this goal in my lifetime so that it may be the norm for my son's generation.

Thank you

Paul Cashin

**From:** [Paul Doughty](#)  
**To:** [Electricity](#)  
**Subject:** Energy Plan For Bermuda  
**Date:** Wednesday, November 21, 2018 12:43:55 PM

---

To whom it may concern.

I have read through the majority of energy plans listed on the RAB website and come to the conclusion that the BCM McAlpine plan is not only the most sound, but also the most flexible.

Kind regards

Paul H Doughty

Sent from my iPad



Paulina Northover Brooks

'SOFTWINDS'

4 Shaw Wood Crescent

Pembroke

HM 01

Tel: 296 0943

E-mail: [pbrooks@longtailaviation.bm](mailto:pbrooks@longtailaviation.bm)

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

23<sup>rd</sup> November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

.

I look forward to learning of the final outcome of the IRP consultation process.

I would like to add that I have solar panels at my house. They have been a total success. I just don't see how Bermuda cannot look to renewable energy going forward and in keeping with our future, and helping our planet and beautiful Island. I also read with interest Sir John's letter to the newspaper on the subject. His thoughts and comments were interesting, and informative, and reinforced my own feeling about what has to be done in the future.

Yours sincerely,

*Paulina Northover Brooks*

**From:** [Pauline LeBlanc](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 3:34:18 PM

---

I am writing to urge the RAB to push forward the Bermuda Better Energy Plan, Belco's tyranny needs to end.

Pauline Leblanc.

**Pauline LeBlanc**  
*Office Manager*

**Elementum (Bermuda) Ltd.**  
S.E. Pearman Building, 5th Floor  
9 Par-La-Ville Road  
Hamilton, HM11  
Bermuda  
T: (441) 294-1279  
C: (441) 599-0086

**From:** [peter beckett](#)  
**To:** [Electricity](#)  
**Subject:** Better Energy Plan  
**Date:** Tuesday, November 20, 2018 12:01:31 PM

---

Dear Sir,

Sometime last month I wrote an opinion on the Better Energy Plan but I was unable to send it to you on the website for some reason. Instead I sent it to your mailing address and I am hoping you can confirm this was received so that I know my view on the matter is in the mix. Many thanks, Peter Beckett

**From:** [Peter Rodger](#)  
**To:** [Electricity](#)  
**Subject:** Better Energy Plan  
**Date:** Tuesday, November 20, 2018 2:35:02 PM

---

My wife and I are very much against the Belco plan and in favour of the Better Energy Plan, for a variety of reasons which I am sure are being set out by many other taxpayers. Regards, Peter and Louise Rodger

**From:** [Peter Haynes](#)  
**To:** [Electricity](#)  
**Subject:** Support for The Bermuda Better Energy Plan  
**Date:** Thursday, November 22, 2018 5:24:06 PM

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This letter is to object strongly to Belco's proposal to change all their generation capacity to operate off gas generators and fossil fuel. This is very harmful to our climate and increasing global warming and ultimately raising our sea levels.

We must consider our children's children and plan to reduce emissions of carbon dioxide into the atmosphere for the benefit of Bermuda and the rest of the world!

The rest of the world are investing heavily in renewable energy power systems, and planning for reduction of their fossil fuels. This includes many countries with less solar energy power than Bermuda, but also includes the Caribbean, which has more solar in certain areas than Bermuda.

Therefore Belco's proposal should be completely revised to support at least 60% of renewable energy systems, which is detailed in the Bermuda Better Energy Plan( BBEP).  
submitted by BE solar.

This BBEP is economically better for all Bermudians and makes sense by not spending money overseas on fossil fuels, in addition to not put more money in dividends into Belco's shareholders pockets.

The Regulating Authority should support the above plan which will economically benefit Bermudians, by increasing jobs in renewable energy and keep money in Bermuda to help the economy.

If Belco invested in new plant that relies on fossil fuels to operate for the next 25 years, this will increase and continue to increase the cost per kilowatt hour to everyone in Bermuda over this period and further into the future.

Renewable energy production is more economical than fossil fuels, provides employment fo Bermudians, plus assists in reducing the CO2 emissions for the environment and our Grandchildren.

It must be noted that Belco will still supply the base load required with fossil fuels, so this proposal does not mean that Belco will be out of business, or that they will not continue to operate economically.

It just means that Bermuda needs to follow the worlds example and increase the amount of Bermuda based renewable energy used to supplement our electricity demands.

Best Regards  
Yours Sincerely

Peter W Haynes  
MIEEE, I Eng , AEE, REM  
Unit 1  
14 Idlewood Drive  
Hamilton Parish  
CR01

Sent from my iPad

**From:** [Peter Smith](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Future Energy Plan  
**Date:** Wednesday, November 21, 2018 10:48:23 AM

---

To the Regulatory Authority of Bermuda,

I am writing to voice my support for Bermuda's future energy strategy to be that articulated in the Bermuda Better Energy Plan. My main reasons for supporting this plan are these:

1. Belco is a for profit business and thus the board must pursue the most profitable future for the company. Investing in renewable energy will compromise this objective. and you need to look no further than their current business strategy to see evidence of this. The commercial electricity rates get cheaper as you spend more, the opposite of homeowners. This makes solar utterly unfeasible from a financial perspective to commercial building owners.
2. Financial Independence. We need to uncouple our own economic well being from the world market for fossil fuels. Renewables have a predictable maintenance and installation cost.
3. The environment.
4. Status among other countries. Accepting Belco's plan moves us in the opposite direction to the rest of the world. Following the path articulated in the Bermuda Better Energy Plan provides us with an opportunity to be a leader in the planet's future. The Belco Plan could compromise our business and tourism sectors.
5. Seriously reducing our dependence on fossil fuels is achievable. We are a small country. Given the commitment of Government and our people, we can do this.

Sincerely,

Peter W. Smith  
Paget

**From:** [Arnold, Richard](#)  
**To:** [Electricity](#)  
**Subject:** Better Bermuda Energy Plan  
**Date:** Wednesday, November 21, 2018 4:23:17 PM

---

Good day Regulatory Commissioners,

I am a Bermudian with children. Each and every month I pay my horrendous Belco bill as we need electricity to live a normal life. The cost of electricity ranks up there in my monthly expenses behind mortgage and food. We (BERMUDA) need to do better than continuing to support BELCO and their energy plan. It's time Bermuda was open to renewable energy sources. The rest of the world is evolving and we must do better. I fully support the Bermuda Better Energy Plan.

To do my part - I would be more than happy to purchase solar panels for my home but right now with our mortgage, cost of bills (electricity being the most expensive) and food we simply cannot afford the upfront cost or take out a loan. If there was more incentive given by the government I would try to work this in my finances.

On behalf of myself and my family we implore you to explore the recommendations made in the Bermuda Better Energy Plan.

I hope you do the "right thing" for future Bermuda generations.

Kind regards,  
Richard Arnold  
Analyst Programmer  
FIL Limited (Bermuda)  
Tel: Internal 8-765-7290 External (441) 297-7290  
Fax: (441) 295-9373

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**From:** [cordayr48@aol.com](mailto:cordayr48@aol.com)  
**To:** [Electricity](#)  
**Subject:** vote for Bermuda Energy Plan  
**Date:** Wednesday, November 21, 2018 8:00:08 PM

---

Please chose the Bermuda Energy Plan for Bermuda's future.  
thank you Rob Corday



**From:** [Rosheena Beek](#)  
**To:** [Electricity](#); [Dana S. K. Selassie](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Friday, November 23, 2018 7:37:12 AM

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Good day,

I support the Bermuda Better Energy Plan. But I don't support BELCO having sole monopoly over it. Regulations have to be put in place to make sure of that.

Sincerely,  
Rosheena Beek

[Sent from Yahoo Mail on Android](#)

**From:** [Roy Dennison](#)  
**To:** [Electricity](#)  
**Cc:** [djoll@sargassointernational.com](mailto:djoll@sargassointernational.com); [peepotter2@yahoo.com](mailto:peepotter2@yahoo.com)  
**Subject:** I Support Bermuda Better Energy Plan  
**Date:** Wednesday, November 21, 2018 4:15:02 PM

---

*Dear Sir,*

*I would like to express my support for the **Bermuda Better Energy Plan**.*

*Thank You.*

*Roy Dennison*

Sally Meredith  
51 Manor House Drive  
Flatts FL 07  
532-2348  
[sally\\_meredith@yahoo.com](mailto:sally_meredith@yahoo.com)

November 24, 2018

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Bermuda's excellent source of wind and solar resources has been under-utilised to date.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



Sally Meredith

Sarah Carr  
14 Knapton Estates Road  
Smiths FLO8  
Bermuda  
sarahamycarrbda@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

19 November 2018

**Re: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

As a Bermudian, I consider this issue critical for the future of the island – both from an environmental and economic standpoint. I have evaluated the two proposals put forward to the Regulatory Authority and am writing this letter as evidence of my support for the Bermuda Better Energy Plan submitted by BE Solar (the "BBEP").

The key factors driving my conclusion are that the BBEP:

- Diversifies reliance for energy generation away from our single utility model where we are dependent on market fluctuations in commodity costs.
- Protects and prepares our country for future generations of Bermudians by procuring cleaner means of generating electricity.
- Is based on clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs.
- Uses technology that is in commercial use in other jurisdictions and would allow Bermuda to continue to move in a progressive and environmentally sustainable direction, in line with so many other jurisdictions globally.
- Is in line with the United Nations Sustainable Development Goal No.7 – targeting the move to more affordable and cleaner energy by 2030.

Thank you for your time in reviewing my response. Please do take the above into consideration when making a decision on the IRP Bulk Generation Proposals before the Authority.

Yours sincerely,



Sarah A. Carr

Sarah Ruberry  
Elys Peak  
10 Caithness Drive  
SB01  
Bermuda  
599 0188  
sarahcfarrar@yahoo.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

25 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk  
Generation Proposals**

Dear Ms Lister,

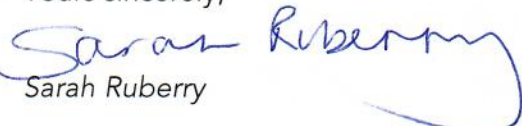
I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- *It is disappointing that as a island with an abundant of natural energy resources to utilize that we are not leading the way in sustainability. Unless Ministers act for the long term and greater good rather than short term profit, the island will not be sustainable, national debt will increase. It is YOUR responsibility to act responsibly on behalf of future generations.*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

  
Sarah Ruberry

Sarah Spurling  
PO Box GE298  
St. Georges  
GEBX  
Bermuda  
441-535-0479  
srspurling@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

19 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- This is an important element of our children's and the island's future. We would be a role model for other jurisdictions.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

A handwritten signature in blue ink, consisting of a series of loops and curves, likely belonging to Sarah Spurling.

**From:** [Sarah Vallis](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda's Energy Plan - the Bermuda Better Energy Plan  
**Date:** Tuesday, November 20, 2018 10:34:44 AM

---

Dear Sirs,

I write to you today to express my support for the **Bermuda Better Energy Plan**.

The Belco Plan does not represent Bermuda's best interest does not consider the long term rising cost of electricity for Bermudians. It will also put Bermuda at a competitive disadvantage in attracting new business. With the serious effort by Government to move Bermuda forward with fintech the only a plan worth considering is one that also puts Bermuda ahead of competing jurisdictions using renewables, reducing use of fossil fuels and lowering the cost of energy for the long term.

Sarah Vallis Pietila

Scott King & Beryl Brown  
"Quaint Corner Cottage"  
2 Mizzentop, Box 16  
Warwick, WK06  
293 0641  
[Scotty@Logic.bm](mailto:Scotty@Logic.bm)

22 November 2018

Ms. Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

Dear Ms. Lister,

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

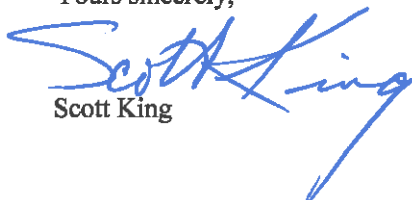
I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilizing energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Emphasizes local renewable resources (wind & solar) and gradually reduces our dependence on imported oil and gas
- Makes a solid contribution towards limiting global warming as documented in the IPCC's latest Special Report 1.5.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

  
Scott King



Shanna-Lee Kerr  
5 Watlington Road West  
Devonshire, DV06  
Bermuda  
441-505-1936  
tskerr@yahoo.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

November 21, 2018.

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy. It will reduce our carbon footprint.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- It is important to be 'environmentally friendly' as it is the way forward.
- It will generate jobs and improve the economy.
- It will inspire and encourage other islands to look at environmentally sustainable options for energy use.
- It will educate the younger generation and set them on a path to continue to choose 'green' options.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,  
Shanna-Lee Kerr

Simon Marks  
1 Fairpoint Gardens  
Pembroke  
HM 05  
Bermuda  
405-2688  
Simon.marks@axiscapital.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

10 October 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

I feel strongly that it would be in Bermuda's interests to lead the way globally in renewable and low carbon energy provision, it would put us on the map as an eco-tourism destination and fits well with our ethos of protecting our seas and environment. Reliance on fossil fuels in the longer term is highly questionable considering that this is a finite resource and it will take 20 years for the infrastructure to come online – by which point the rest of the world will have moved on and we will be stuck with an outdated system and possibly a shortage of fuel.

I support the Bermuda Better Energy Plan submitted by BE Solar, as this plan:

- Is the most consistent with the purposes of the Electricity Act and ministerial directions for the least-cost provision of reliable electricity. The plan provides clear and convincing evidence that renewable energy can deliver a substantial reduction in carbon emissions while stabilising energy costs through clean renewable energy.
- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Please add your own personal reasons for supporting the Bermuda Better Energy Plan here....

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Simon Marks

Skye Kerr  
5 Watlington Road west  
Devonshire  
DV06  
Bermuda  
Shkerrington@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

21<sup>st</sup> November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

I am writing to submit a response to the Regulatory Authority of Bermuda's consultation on IRP Bulk Generation Proposals.

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- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Will draw in more tourism and business for the island if we are known for being environmentally friendly as being environmentally friendly is becoming more and more popular.
- Is vital towards ensuring a safe, more economically secure and sustainable future for the island
- Will generate more jobs for the islands citizens thus generating more towards our economy
- Will help promote environmentally friendly practices to be used not only our island, but all over the world

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Skye Kerr

Sofia Welmer  
Unit 21 Manor House  
Smiths, Flatts Village  
FL07  
Bermuda  
704-6420  
sofiwelmer@gmail.com

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

22 November, 2018

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- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.

I am a Bermudian, but I am also an international citizen. I have lived all over the world growing up, including; Poland, England, Panama and Sweden. In the time I have spent in those different countries I have developed a deeper love for Bermuda than any of them. That is why I think the Bermuda Better Energy Plan is so amazing, it gives our island a greater chance at surviving the horrible effects of climate change and also gives us a chance to reduce those effects. I may be only 18 years old and my knowledge on the subject may not be the best, however, I am one of the many people that has to live in this world and on our island for the rest of my life and I hope that it is an island I can be proud to say that, "yes, we have 64% renewable energy resources at home and we are doing the best we can to be more sustainable."

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

Sofia Welmer



ocal



Renewable

Infinite supply that is....

FREE

SAFE

CLEAN!

Creates job opportunities locally.

Could supply 2/3 of Bermuda's energy needs.

Accounting for the generation to come.

Respects our only planet home.

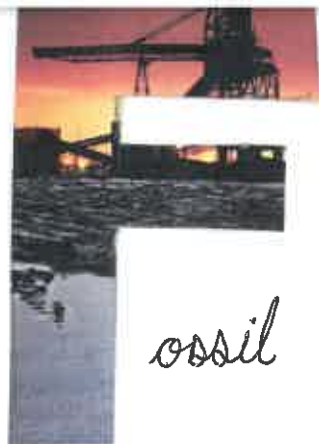
Solar panels, wind turbines providing our energy.

Progressive.



Energy

By: The Osborne / Raynor Class



Finite resource, which will one day be no more.  
Earth's climate will continue to suffer as we change  
her cosmic course.

Destabilizing her and pummeling her with fracking.

Defying her natural laws, disrupting her perfect  
peace.

The sea-life will suffer.

The LNG plant will be built upon her delicate waters.

Money leaving our economy.

Increasing air pollution.

Obstructing our ability to breath clean air.

Her sons and daughters will suffer.

Affecting her children of tomorrow.

FAIL, FAIL, FAIL!!

By :

The Osborne / Raynor Class

Spencer Butterfield  
"Harting Hill"  
8 Hastings Road, Pembroke  
HMo5  
Bermuda  
278-9492  
sbutterfield@bv.bm

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

5 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

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- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies that follow industry best practices to produce robust results on which the conclusions of the Better Energy Plan are based.
- Proposes 64% of electricity being provided by renewable energy from the sun and wind by 2038.
- Recognises that Bermuda has excellent solar and wind resources. Using them could keep millions of dollars a year in the local economy.

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



Spencer Butterfield

Jim Butterfield  
"Cove Cottage"  
Pembroke  
HMo5  
Bermuda  
278-9460  
jbutterfield@bv.bm

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

5 November 2018

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

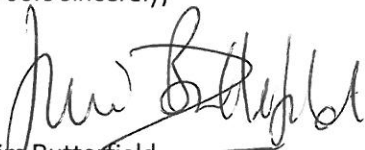
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Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



Jim Butterfield



**From:** [Moss, Spencer](#)  
**To:** [Electricity](#)  
**Subject:** Better Bermuda Energy Plan  
**Date:** Wednesday, November 21, 2018 3:07:46 PM

---

Good day Regulatory Commissioners,

I am a Bermudian with children. Each and every month I pay my horrendous Belco bill as we need electricity to live a normal life. The cost of electricity ranks up there in my monthly expenses behind mortgage / rent and food. We (BERMUDA) need to do better than continuing to support BELCO and their energy plan. It's time Bermuda was open to new / renewable energy sources. The rest of the world is evolving and we must do so to. I fully support the Bermuda Better Energy Plan.

On behalf of myself and my family we implore you to explore the recommendations made in the Bermuda Better Energy Plan.

Thank you for doing the "right thing" for future Bermuda generations.

Kind regards,

Spencer

**Spencer Moss | SEC Compliance Officer | FIL Limited**

FIL Limited

Pembroke Hall 42 Crow Lane Pembroke HM 19 Bermuda

Tel: + 1-441-297-7219 | I: 8-765-7219 | E: [Spencer.Moss@fil.com](mailto:Spencer.Moss@fil.com)

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**From:** [Starla Williams](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Sunday, November 25, 2018 6:46:36 PM

---

I support the Better Energy Plan. It is the best way forward for the island.

Regards,

Starla Williams  
Tiny Boxwoods  
62 Harrington Sound Road  
Smiths FL08

Sent from my iPhone

**From:** [Keith Fisher](#)  
**To:** [Electricity](#)  
**Subject:** IRP  
**Date:** Sunday, November 25, 2018 4:18:28 PM

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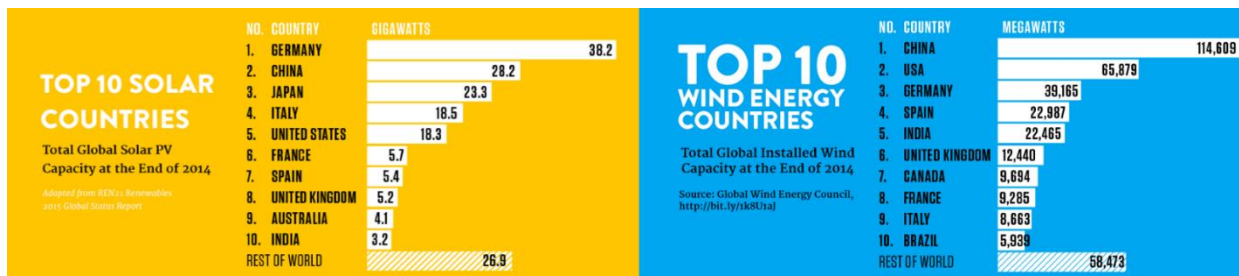
We are very uncomfortable that the IRP will lock Bermuda into power generation primarily from fossil fuels ("business as usual") and limit the growth of solar and wind renewable energy resources.

Keith and Suzette Fisher  
Cedarberry, 5 Pie Crust Place, Southampton,

## The Future of Generating Electricity in Bermuda

The Better Energy Plan is a proposition to produce 64% of Bermuda's electricity by 20 years on solar and offshore wind energy. They state that energy demand is estimated to reduce by 30% in the next 20 years due to increases in energy efficiency, and therefore renewable energy will pose as the best option as it works efficiently with energy storage and LPGs which combined, can achieve their main goal of "providing a diverse yet secure and affordable supply of electricity for decades to come." I strongly agree and support this plan.

Bermuda is a small island and has many energy restrictions and other precautions that must be looked at when deciding how to generate and transport/distribute energy. As of now, the primary form of energy is through means of imported fossil fuels (1.5 billion kWh) with very little input from renewable, of energy. Due to the island's geographical restrictions however, there are many energy sources that cannot be achieved. Nonetheless, as means of generating electricity develop, why shouldn't Bermuda's methods. Many other island economies have already started their journey towards a renewable future: Cayman is predicted to generate 70% of their electricity on renewables by 2027, Jamaica is predicted to generate 50% of their electricity on renewables by 2030. However, if Bermuda follows its current path, it's only predicted to generate 5-10% of their electricity on renewables by 2038.

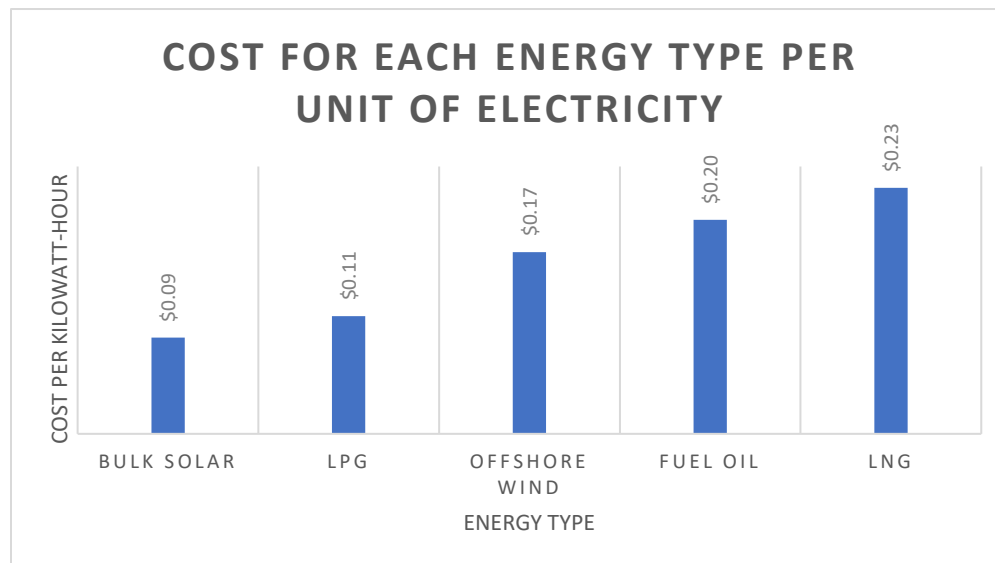


Infographic taken from "climateresourcesproject.org" shows which countries produce the most renewable energy.

As BELCO has stated, "in Bermuda we produce electricity directly through large engines which use fuel oil or diesel to make them work. These engines are directly connected to a generator and do not rely on steam to spin the generator shaft." Now while this may be the traditional and reliable method of generating electricity, it's not on par with modern technology. As the renewable energy movement grows every day, in my opinion, the use of foreign fossil fuels is not the best method for Bermuda. Due to Bermuda's aging methodology in generating electricity, it'll soon be unable to provide sufficient energy to the island becoming less and less efficient while increasing in price. The Bermuda Better Energy Plan stands as the plausible option for meeting these conditions and in my opinion seems the only best option for the future for the energy of Bermuda.

With the implementation of renewable energy (offshore wind stations and solar), utilization of local resources and LPG I believe that it is possible to evade or lessen many of these problems: energy efficiency, consumption of fossil fuels (air pollution, land pollution etc.), reduced carbon emissions (global warming), safety and cost-efficiency.

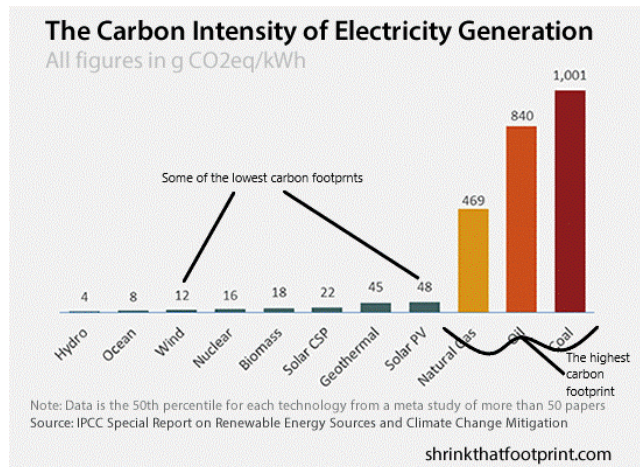
Due to the unreliable fluctuating prices of fuels and the rising prices of LNG, it's a risk to remain a fossil fuel dependent economy. On the other hand, as the use of renewable energy increases, the prices are falling. As stated by Business Insider, "The cost of producing one megawatt-hour of electricity – standard way to measure electricity production – is now around \$50 for solar power, according to Lazard's math. The cost of producing one megawatt-hour of electricity from coal, by comparison is \$102 – more than double the cost of solar." As of 2015, information gathered by the website "WorldData.info" states that only 2.4% of energy was generated from renewable sources. The other 97.6% consisted of foreign fossil fuels. As Bermuda develops and grows as an economy, the demand for energy will only continue to grow and so will the prices. According to predicted prices by The Better Energy Plan and "confusedaboutenergy.co.uk", bulk solar will cost \$0.09/kWh, offshore wind will cost \$0.17/kWh, LPGs will cost \$0.11/kWh, Fuel oil will cost \$0.20/kWh and LNG will cost \$0.23/kWh. The renewables are the best option to invest in.



*Graph represents prices of each energy type per unit of energy.*

In addition, renewable energy is vastly more environmentally friendly in comparison to liquefied natural gas. By switching to solar and wind energy we can drastically decrease Bermuda's carbon emissions. The Bermuda Better Energy Plan estimates 43 gCO<sub>2eq</sub>/kWh of carbon to be emitted by solar and offshore wind power, while 1500 gCO<sub>2eq</sub>/kWh of carbon will be emitted with oil and LNG combined. In addition, with the assistance of LPGs rather than LNGs, it'll be safer and cleaner for the environment.

Furthermore, 'energysage.com' states that the installation of solar energy drastically decreases the effects of greenhouse gas emissions. According to the U.S. Energy Information Administration, the average household with solar panels in Connecticut uses 8,756 kWh of electricity per annum. They stated that switching to solar energy in that state has the same effect as planting 155 trees every year, and there's no doubt that it'll have the same regenerative effects on our island to keep/improve our islands natural beauty. In addition, according to the NREL (National Renewable Energy Laboratory), widespread renewable energy adoption can 'significantly' reduce nitrous oxides, sulphur dioxide and other harmful substances.



Graph taken from  
"shrinkthatfootprint.com" and  
annotated by Themika  
Thennakoon

In order for Bermuda to become a renewable energy economy, we need to be able to store the energy for when the sun is not shining, and the wind is not blowing. Battery storage may be the answer. As technology advances, the efficiency of a battery increases too. In fact, solar-plus-storage (battery storage) has become efficient enough for many countries to move with the plan. According to "Energy-Storage.news", the installation of solar-plus-storage will be one of their lowest cost energy sources and will also be an essential component of Hawaii's renewable energy goals.

In conclusion, the Bermuda Better Energy Plan is the most suitable long-term option for Bermuda as it provides a safe, sustainable and reliable energy solution for Bermuda, one that's more cost-efficient and cheaper than current plans, one that promotes the use of cleaner energy and technology for Bermuda and one that will shape the future of our island home for the better. For these reasons, I strongly support and stand for the Bermuda Better Energy Plan.

Thomas Dunstan  
10 Pokiok Crescent  
Smith's FL05  
Bermuda  
T: +1 (441) 238-2907  
E: tdunstan1@outlook.com

21<sup>st</sup> November 2018

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

**Subject: Response to Consultation Document: Comments on IRP Bulk Generation Proposals**

Dear Ms Lister,

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- Uses technology that is in commercial use in other jurisdictions.
- Has been developed using detailed and transparent assumptions and methodologies.
- Reduces Bermuda's reliance on foreign resources
- Helps Bermuda to remain an attractive destination to international business and tourism
- Demonstrates Bermuda's global leadership to mitigate the causes of climate change

Thank you for considering my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,



**15 Garthowen Road  
Devonshire DV 07**

25 November 2018

The Regulatory Authority of Bermuda  
Hamilton

Sirs:

Response to Consultation Document : Comments on IRP Generation Proposals

We have always chosen conservation in our lifestyle and were pleased to 'go solar' when encouraged by Government. We were one of the two hundred first purchasers of solar panels and have encouraged others to do likewise.

The escalating cost of electricity is a hardship to many families and we believe it is imperative that Bermuda look to alternative methods of generating electrical power rather than be subject to fuel prices imposed by foreign imports. Countries like Hawaii have successfully turned to more solar and the erection of windmills to generate power has grown around the world where wind is reliable.

Bermuda should plan to be more self-sufficient and we support the Bermuda Better Energy Plan as the best way suggested to create that self-sufficiency.

Sincerely

Thomas B Moss and Deanna M Moss  
Tel. (441) 236 7321  
E-mail: tbmoss@northrock.bm



*Tacuma J Stevens  
8 Halfway Lane  
Smith's Parish, FL08  
Tel (441)534-2303  
tjstevensbda@gmail.com*

19 November 2018

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

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- Has been developed using detailed and transparent assumptions and methodologies.
- *The use of more solar and other non-renewable power sources that we have easy access to makes more sense than using a fossil fuel based source that needs to be imported on a ship burning fossil fuels itself. We owe it to ourselves and future generations to use more responsible and renewable resources we have at our finger tips.*

Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

***Tacuma J. Stevens***

**From:** [Gibbons, Tracey](#)  
**To:** [Electricity](#)  
**Subject:** Bermuda Better Energy Plan  
**Date:** Tuesday, November 20, 2018 5:54:50 PM

---

I would like to voice my support for the Bermuda Better Energy Plan. The island has tremendous natural resources that can be harnessed to generate clean and affordable electricity. To continue to be so heavily reliant on fossil fuels as the BELCO plan requires does not make sense from an environmental or economic perspective. Having viewed the plans I urge you to please give full consideration to the Better Energy Plan which from all perspectives appears to me to be the better option.

Tracey Gibbons

---

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*Tracie Baptiste  
6 Mellow Sky Lane  
Paget  
PG 03  
Bermuda  
441-703-2343  
tracieleebaptiste@gmail.com*

Monique Lister  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

*22 November 2018*

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Thank you for your time in reviewing my response, I look forward to learning of the final outcome of the IRP consultation process.

Yours sincerely,

*Tracie Baptiste*

**From:** [Trevor Nelson](#)  
**To:** [Electricity](#)  
**Subject:** Consideration of BBEP  
**Date:** Tuesday, November 20, 2018 2:11:37 PM

---

Dear Ms Lister,

I am writing as an interested member of the Bermuda public. I have noted that both BELCO and BE Solar have submitted energy plans for the future. I note also that BELCO's plan has omitted many sources of energy including wind and solar. I would hope that the Regulatory Authority considers sources from both plans in shaping the policies of Bermuda going forward.

Bermuda is very far behind the rest of the world in considering alternate and more sustainable sources of energy rather than just Diesel or LNG. Bermuda should be looking, at a minimum of generating 20-30% of its electricity through alternate sources within the next 10-15 years.

My only hope is that the Regulatory Authority considers both plans when making a decision on the IRP Bulk Generation Proposals before the Authority.

Thank you for reading.

Trevor Nelson,  
Bermuda

**From:** [Vincent A Mitchell](#)  
**To:** [Electricity](#)  
**Subject:** Fossil fuels!  
**Date:** Friday, November 23, 2018 12:58:21 PM

---

Dear Sir/Madam

Just hope that Bermuda does take another approach to energy for the future of all Bermudians and the World as a whole. Every little step we take will make a great difference!

Kind Regards

Vincent A Mitchell

33 Knapton Hill

Smiths Parish

Bda.

Sent from my iPhone

**From:** [warren.roe](#)  
**To:** [Electricity](#)  
**Subject:** Concern  
**Date:** Tuesday, November 20, 2018 8:39:32 AM

---

Good Day, we a family of four are writing to express our full support for the proposal from Bermuda Better Energy Plan. We are current solar owners and continue to get the short end of the stick from Belco. We have lost confidence in Belcos vision for a better cleaner Bermuda. It is crazy to think one of the richest Islands to our neighbors down south and Belcos proposal puts us years behind their developments in energy.

Shame on Belco !!

Kind Regards  
Warren Roe

**From:** [Zeudi Hinds](#)  
**To:** [Electricity](#)  
**Subject:** It's a no-brainer  
**Date:** Tuesday, November 20, 2018 12:52:10 PM

---

I support the Bermuda Better Energy Plan.

Warm regards,

Zeudi Hinds