Advancing sustainable hydropower

Annual Report 2020-2021

iha
international hydropower association

Contents

Foreword Putting sustainable hydropower at the heart of the energy transition

There is no certain outcome for hydropower. It is ours to shape.

On one hand, in the run up to COP26, there is unprecedented momentum towards the energy transition.

The Covid-19 pandemic has fast-forwarded some power systems 10 years into the future with very high levels of wind and solar on the grid. In the past year, we had China setting itself a net zero target by 2060 and then President Biden enacting an executive order to re-join the Paris Agreement on his first day in office as well as a slew of other climate actions.

Companies, including in the hard-to-abate industries like transport, heat and steel production, and even the fossil fuels sector, are setting net zero policies and are looking for clean technology solutions. In the financial sector, Larry Fink of BlackRock recognises that "the climate transition presents a historic investment opportunity'.

Energy transition

On the other hand, despite compelling evidence of its central role in providing clean energy and supporting variable renewables, there is no inevitability about hydropower being part of this journey.

Hydropower is rarely listed alongside wind and solar among the key planks of the energy transition, investment in the sector is rarely financially enabled and some countries do not even recognise all hydropower projects as renewable.

Despite being the largest renewable energy source in the world and providing over 90 per cent of all energy storage, hydropower does not yet create the excitement, nor attract the development investment, of wind, solar, hydrogen or lithium batteries.

New initiatives

On 16 November 2020, IHA celebrated its 25th anniversary. We have come a long way from the World Commission on Dams in 2000 in our endeavours to advance sustainable hydropower. But we have much more still to do.

Over the past year we announced and adopted the IHA Charter for Sustainable Hydropower, launched a consultation on a new Hydropower Sustainability Standard, and convened the International Forum on Pumped Storage Hydropower, to name just a few initiatives.

The year ahead

As we prepare for a ground-breaking World Hydropower Congress and an historic United Nations Climate Conference, we, as an association and a movement, need to work with our key stakeholders:

- Governments to create enabling policy that makes planning more streamlined, and quicker, without compromising on sustainability.
- Market operators to find mechanisms to value electricity beyond the cost of generation – they need to value storage, flexibility, enabling of variable renewables and water services.
- Civil society to build a common ground in which the sector and others are held to account in delivering the appropriate trade-offs between infrastructure and the long-term energy transition.
- The wider renewables community to more clearly express how hydropower enables and advances wind and solar penetration.
- Energy-intensive industries that need hydropower to meet their net-zero emission commitments.
- Regional, national and local grids to recognise hydropower as, in most cases, a key option to get to 100 per cent decarbonisation.

There is a momentum behind us. This momentum needs to be harnessed and steered if the climate crisis – the defining challenge of the next few decades – is going to be addressed.

Roger Gill
IHA President

Eddie Rich
IHA CEO

Celebrating 25 years of IHA

IHA celebrated its 25th anniversary on 16 November 2020. On this historic date, IHA's Board announced the adoption of a new IHA Charter for Sustainable Hydropower.

LEARN MORE

In the words of our members

Celebrating 25 years of IHA

“IHA has become an important platform for international hydropower stakeholders to communicate and plan for the future.”

China Three Gorges Corporation

“IHA has no equivalent. EDF welcomes IHA’s action to promote the development of hydroelectricity in synergy with other more variable renewable production such as solar and wind power.”

EDF

“GE Renewable Energy is proud to have been one of IHA’s privileged members for many years now. Since IHA was founded, the hydropower sector has more than doubled in size from 625 GW in 1995 to over 1,300 GW today.”

GE Renewable Energy

“IHA is pivotal in promoting the recognition of hydropower’s strategic role in the energy transition and in attaining GHG emission reduction targets.”

Hydro-Québec

“IHA is an excellent organisation that represents the industry in the best possible way, mainly through the diversity of its membership.”

Voith Hydro

Our membership model is changing

Why are you a member of IHA? Ask any of our members and you're likely to get very different answers. Dig a little more and you will start finding a theme that goes something like this:

"Hydropower is a modern, forward-looking industry that can help address some of the world's greatest challenges in a sustainable manner. That is certainly what we believe as a company. As members of IHA, we belong to an association that not only shares our values but helps others understand that we belong to the progressive end of the sector. That progressive voice needs to be heard, and through our membership we are able to amplify our voice."

In short, membership of IHA is valuable first and foremost because we are a values-driven association with a strong focus on sustainability. The question then becomes, how do we ensure that our membership model is best suited to deliver?

Charter for sustainable hydropower

The adoption of the IHA Charter for Sustainable Hydropower by our Board in November 2020 was an important step towards building an identity of shared values centred on sustainability. The Hydropower Sustainability Standard is another. The next step will be to move these elements into the membership agreement. Membership should mean more than a willingness to pay fees.

Simultaneously, we are reviewing our membership model so that it is better suited to deliver on our mission and values. Members' contributions are what allow us to do our work on behalf of sustainable hydropower. If we do this well, everyone benefits.

Delivering our mission

Membership categories (Platinum, Gold and Silver) are not well suited to this model. Instead, contributions should depend on the nature of our members so that the load is equitably distributed. We need to move from "pay more and get these additional benefits" to "changing the way our industry works and is perceived can help address our biggest global challenge – here is how you can help".

Individuals and non-corporates have an important role to play in delivering on our mission. We often find that some of our most fruitful relationships are with organisations and individuals who are not, and may never be able to become, individual or affiliate members.

Transformational changes

This suggests that we need a different model of partnership with these actors that is equally based on support for the IHA Charter for Sustainable Hydropower and takes full advantage of the networking opportunities provided by Hydropower Pro, our online platform for the sustainable hydropower community.

These are transformational changes with wide-ranging consequences on the governance of the association.

Over the coming months, our priority will be to consult and inform our members with an aim to transition all new and existing members to the new model by 1 April 2022. This includes transitioning to new membership constituencies and fee structures, and transitional arrangements will also be sought with anyone who requests them.

Added value

Whilst we have a lot of work ahead of us, the result should deliver significant added value to our members. It should also make us better able to deliver on our core objective of promoting sustainable hydropower.

At the end of the day, this is why members join IHA.

Pablo Valverde
Head of Membership and Operations

IHA Charter for Sustainable Hydropower

On 22 October 2020, the association's Board adopted the IHA Charter for Sustainable Hydropower, which symbolises our commitment to the responsible and sustainable development of hydropower. The Charter was formally announced on 16 November 2020 on the occasion of the association's 25th anniversary.

We recognise:

- **that hydropower plays an important role as a renewable energy source in the clean energy transition, in water management, and in providing solutions to climate change;**
- **that sustainably developed and operated hydropower can make a significant contribution to national and international efforts to achieve Sustainable Development Goals 6-9 and 13, as well as global climate change targets;**
- **the important role that hydropower can play in accelerating the adoption of variable renewable energy forms as part of a coherent, holistic energy policy;**
- **the wider benefits and services that hydropower reservoirs can provide on flood control and drought mitigation, resilient water resources, irrigation, transport and leisure;**
- **the positive impact that hydropower projects can have on local communities and environments, when well planned and executed in line with international good or best practice in sustainability;**
- **the low carbon emissions of well-designed and appropriately sited hydropower projects;**
- **the importance of learning from experience, adhering to and maintaining internationally agreed standards, and developing tools and systems to continuously improve.**

We agree that:

- **a commitment to sustainable hydropower should be expected when designing, developing and operating hydropower projects. Projects should be in accordance with internationally recognised levels of good or best practice as defined by the Hydropower Sustainability Tools;**
- **good or best practices such as those indicated in the Hydropower Sustainability Tools should be followed and encouraged in stakeholder and business relations, for example within a project's supply chain;**
- **hydropower projects should be continuously monitored and gaps against sustainability performance adequately addressed;**
- **industry needs to respect, encourage and continue developing strong sustainability standards in collaboration with non-industry stakeholders.**

2020: The year in review

2020 was a year like no other. Global disruption from the Covid-19 pandemic underlined the demand for, and resilience of, renewable energy solutions such as hydropower.

IHA has been at the forefront of initiatives to promote a green recovery and enhance the sustainability of projects all around the world.

Here are some of the highlights from the last year.

January

Hydropower on the policy agenda
At the International Renewable Energy Agency (IRENA)'s General Assembly in Abu Dhabi, the Government of Switzerland received support from some 40 countries for a new hydropower sector initiative, at a ministerial session organised with IHA and the World Bank.

The IRENA Collaborative Framework on Hydropower would later launch with the goal of expanding the deployment of hydropower technologies to support the clean energy transition.

"As an enabler for integrating higher shares of renewable energy into power systems, hydropower is set to play an important role in the energy transition and will be critical to the decarbonisation of economies," said IRENA Director-General Francesco La Camera. **Read online**

February

Bringing together decision-makers in Africa
Senior African government representatives and leaders from the energy sector, financial institutions and civil society gathered in Côte d'Ivoire. The event was organised by IHA and the African Development Bank and looked at overcoming challenges to project development and access to finance. **Read online**

Sustainability assessment fund
Later in February, a new Hydropower Sustainability ESG Assessment Fund was launched for developers and operators in Africa, Asia, Europe and the Americas to benchmark and raise their social and environmental performance. The US$1m fund is to be awarded to up to 40 projects over four years. **Read online**

2020: The year in review

March

The scale of the Covid-19 crisis becomes clear

As the scale of the coronavirus pandemic became clear, countries around the world went into lockdown. "Covid-19 will significantly impact our industry. It will hamper global supply chains, delay construction and temporarily reduce demand," warned IHA President Roger Gill. "IHA will be ready to voice the role of sustainable hydropower in delivering a better post-Covid society."

A Covid-19 position paper later published by IHA looked at the impacts of the crisis on the hydropower sector and how developers and operators have responded. It outlined recommendations to assist governments and international financial institutions as they developed their economic recovery plans. **Read online**

"We are looking forward to collaborating with the most relevant companies, partners and institutions in the world's hydropower community through IHA."

EPCG, new IHA member

April

International organisations urge green recovery

IHA joined with IRENA and more than 100 organisations to issue a joint call for action urging policymakers to prioritise green growth as part of their Covid-19 recovery plans. The recommendations cover a range of priority actions to ensure a rapid and sustained economic recovery, promoting renewable solutions as well as the need for market and policy frameworks that support storage and flexibility - services which are provided by sustainable hydropower.

This was followed by statements coordinated by IHA with 16 international and national organisations representing hydropower companies, as well as global renewables associations under the banner of the International Renewable Energy Alliance (REN Alliance). **Read online**

May

Guidance on free, prior and informed consent

New guidance was released by the Hydropower Sustainability Assessment Council, amending the Hydropower Sustainability Tools to underline the importance of hydropower projects achieving the 'free, prior and informed consent' of Indigenous communities.
Read online

IHA's status report tracks global progress

IHA's 2020 Hydropower Status Report showcased the sector's response to Covid-19 and its contribution to global decarbonisation efforts. The seventh edition of the flagship report showed electricity generation hit a record 4,306 TWh in 2019. Installed capacity reached 1,308 GW, as 50 countries and territories completed greenfield and upgrade projects.
Read online

2020: The year in review

June

Hydropower sector presents united front

Senior hydropower industry CEOs met with the head of the International Energy Agency at a special dialogue convened by IHA. The group presented a united message on the need for sustainable hydropower as part of the energy mix for a green recovery.

"Government policies and actions drive investment in the hydropower sector. A 'green stimulus' for low carbon technologies and hydropower infrastructure should be a key pillar of government-led recovery packages," said IHA CEO Eddie Rich. **Read online**

July

World Bank embraces IHA sustainability training

The World Bank is a major force in the development of renewable hydropower plants around the globe. It has applied the Hydropower Sustainability Tools to eight of its projects across four regions, and increased institutional knowledge among governments.

In July the bank's staff took part in a first virtual training course organised by IHA. The course followed other recent collaborations between IHA and the World Bank including the development of a handbook on operations and maintenance strategies. **Read online**

"We are focused on developing pumped storage hydropower so we can play our part in helping achieve net zero targets. We see IHA as a powerful body to help governments understand the importance of these efforts and encourage coordinated action."

ILI Group, new IHA member

August

Study highlights need for modernisation

Hydropower stations constructed decades ago across Asia are in need of significant investment and upgrades to enhance their critical contribution to the region's clean energy goals, according to new research published by IHA.

The study conducted for the Asian Infrastructure Investment Bank (AIIB) identified 66 hydropower stations across 19 countries that could be ripe for modernisation, at an estimated investment value of up to US$13.7bn. **Read online**

2020: The year in review

September

ESG assessment

Gabon's Dibwangui hydropower project was rated as an example of international good practice in sustainability design and planning following an assessment using the Hydropower Sustainability ESG Gap Analysis Tool. Plans for the 15 MW plant achieved good practice across 11 environmental, social and governance (ESG) performance criteria examined in the study. **Read online**

Hydropower jobs report

The hydropower sector is confirmed as third largest renewables employer, with almost two million people working in the industry, according to a report from IRENA. Despite its "huge untapped potential", the report says hydropower employment in 2019 was around six per cent lower than in 2018. **Read online**

October

Training academy launched

IHA launched the Hydropower Sustainability Training Academy for educating sector practitioners on how to use the Hydropower Sustainability Tools and G-res Tool to achieve good practice in their hydropower developments to help ensure existing and future hydropower developments are sustainable. **Read online**

Landmark hydropower agreement

IHA welcomed a landmark collaboration agreement between environmental groups and the U.S. hydropower sector, which recognised the need to tackle climate change with renewable energy while also preserving healthy rivers. **Read online**

A charter for sustainable hydropower

A new IHA Charter for Sustainable Hydropower was adopted by the association's Board on 22 October 2020.

The Charter symbolises the commitment of the association, and its members, to the responsible and sustainable development of hydropower.

It sets out that all hydropower projects should be designed, developed and operated in accordance with good and best practice, as defined by the internationally recognised Hydropower Sustainability Tools. **Read online**

2020: The year in review

November

Pumped storage forum launched

Aiming to enhance the role of pumped storage hydropower in future energy systems, IHA launched the International Forum on Pumped Storage Hydropower chaired by the US Department of Energy and co-chaired by former Australian Prime Minister Malcolm Turnbull. **Read online**

Consultation on a new standard for hydropower

A public consultation was launched on a new Hydropower Sustainability Standard. This would incentivise and recognise responsible project developers, and help investors, governments and communities understand which schemes meet ESG requirements. **Read online**

Happy birthday to IHA

The association celebrated its 25th anniversary on 16 November 2020. This was marked with the announcement of the IHA Charter on Sustainable Hydropower and the relaunch of our website. **Read online**

New innovation report

In late November, the XFLEX HYDRO project, a major EU-funded energy innovation initiative to demonstrate how smart hydropower technologies can deliver a low-carbon, reliable and resilient power system, published its first major report. **Read online**

December

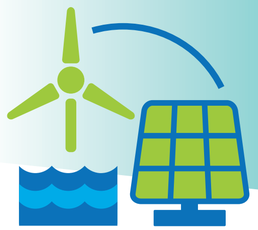
Hydropower at the heart of the energy transition

As the world marked the fifth anniversary of the Paris Agreement on climate change, IHA united with over 100 leading renewable energy players – as members of the International Renewable Energy Agency Coalition for Action – in a joint initiative calling on governments to correct course. **Read online**

EU sustainable finance

IHA responded to a public consultation by the European Commission on new rules to define sustainable finance. IHA supports the need for an EU Taxonomy, but said the proposal as drafted raised concerns for the development of a flexible, efficient, and affordable low-carbon energy mix. **Read online**

Programmes



Clean energy systems

Through our policy and research programmes, IHA seeks to build knowledge about hydropower's value to energy systems.

We promote dialogue and coordinated action to accelerate the penetration of all types of renewables. Our engagement with international organisations, governments and civil society has improved awareness of hydropower's flexibility and storage services.

During 2020, we launched an International Forum on Pumped Storage Hydropower to put forward policy and market policy priorities aimed at expanding clean energy storage.

VISIT ONLINE

Climate change

IHA is working to build knowledge on renewable hydropower's contribution to climate mitigation and adaption.

Planning hydropower systems from a long-term, climate-resilient perspective will protect operations and infrastructure from future climate-related risks.

Our Hydropower Sector Climate Resilience Guide supports owners, developers, governments and investors to plan, build, upgrade and operate facilities in the face of a changing climate.

In addition, we provide training and validation services for the G-res Tool, which is used to report on the carbon footprint of hydropower projects.

VISIT ONLINE

Sustainability

All hydropower projects can and should be developed and operated sustainably.

During 2020, IHA continued to play a leading role in the development of the Hydropower Sustainability Tools.

On behalf of the governing Hydropower Sustainability Assessment Council, we also published a consultation on a new Hydropower Sustainability Standard.

We delivered training and capacity building services on the tools targeted at professionals seeking professional qualifications. In addition, we published practical how-to guides focused on issues from resettlement to downstream flows.

VISIT ONLINE

Programmes

Water management

IHA is a leading voice in global discussions on the water-energy nexus, promoting awareness of the multiple freshwater services provided by sustainable hydropower.

Our Sediment Management Knowledge Hub continues to be a resource of strategies and case studies for restoring sediment transport connectivity, to stabilise reservoir capacity while supporting ecological and environmental functions.

The hub is helping hydropower developers and researchers to implement and refine sediment management practices based on real-life industry experiences and practices.

VISIT ONLINE

Markets and finance

IHA works with developers, investors, international financial institutions and NGOs to unlock greater investment for sustainable hydropower.

Through the International Forum on Pumped Storage Hydropower, launched in November 2020, we are working with partners to devise policy recommendations to incentivise and de-risk the development of pumped storage.

We also work with partners to agree recognised eligibility criteria to fund hydropower projects through green bonds.

VISIT ONLINE

Modernisation

IHA supports the exchange of innovation and industry experiences across the world.

During 2020, we studied the modernisation needs of hydropower through partnerships with the Asian Infrastructure Investment Bank and the Inter-American Development Bank. We also worked with the World Bank and our members to identify good practices in hydropower operations and maintenance in developing countries.

In addition, we are participating in the XFLEX HYDRO project, an EU-funded initiative to demonstrate innovative technologies to improve hydropower's impact in modern power markets.

VISIT ONLINE

RENEWABLES WORKING TOGETHER

world hydropower congress

SEPTEMBER 2021

ONLINE & HOSTED BY COSTA RICA

REGISTER YOUR INTEREST

HYDROPOWER.ORG/CONGRESS

World Hydropower Congress

The online World Hydropower Congress in September 2021 will bring together leading decision-makers, innovators and experts from industry, government, finance, civil society and academia.

The event is co-hosted by the Government of Costa Rica, which has shown strong leadership in the energy transition, achieving 99 per cent decarbonisation through integration of four renewable energy sources.

Hosted by

COSTA RICA
GOBIERNO DEL BICENTENARIO
2018 · 2022

With support from

minae

Hosting partner

ICE

Strategic partners

CTG

EDF

sarawak energy

雅砻江水电
YALONG HYDRO

REGISTER YOUR INTEREST
HYDROPOWER.ORG/CONGRESS

world hydropower congress

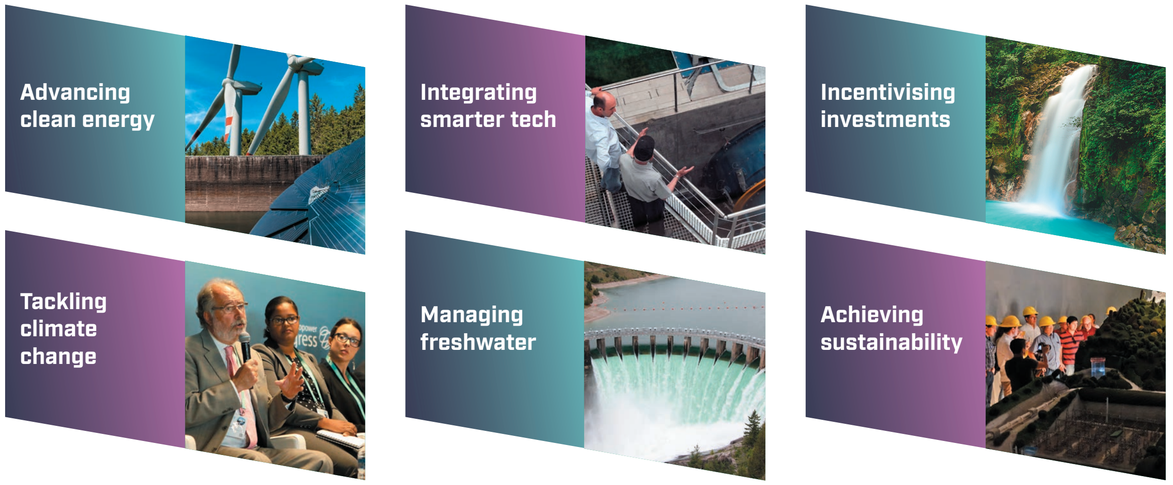
A global declaration

A new declaration for the future of sustainable hydropower will be agreed at the Congress in September 2021.

Two decades after the World Commission on Dams, the San Jose Declaration on Sustainable Hydropower will seek to reset the policy, practice and perception of the hydropower sector.

The declaration will contain three elements – broad principles, commitments and recommendations – and be drawn from extensive consultations to ensure it is progressive and widely accepted.

The outcome statement is expected to underline hydropower's role in supporting other renewables and other benefits, while being clear that good sustainability practice should be a minimum expectation for the future.



The year ahead

COP26

The World Hydropower Congress will be one of the last major energy sector events before the United Nations climate conference (COP26) in the United Kingdom.

The climate talks will bring together heads of government, climate experts and campaigners to agree coordinated action to tackle climate change.

IHA, as an official observer organisation, will take the San Jose Declaration on Sustainable Hydropower and the recommendations of the International Forum on Pumped Storage Hydropower to COP26.

Forthcoming initiatives

Charter for Sustainable Hydropower
The IHA charter will be formally adopted by the association's members at the World Hydropower Congress.

Hydropower Sustainability Standard
A public consultation is expected to result in the establishment of a new global sustainability standard for hydropower.

Hydropower in Protected Areas
A working group will present its recommendations on good practice guidelines for hydropower in protected areas.

International Forum on Pumped Storage Hydropower
The forum bringing together governments, industry, finance, academia and NGOs will share recommendations on pumped hydro.

Collaborative Framework on Hydropower
IRENA is bringing together governments to foster collaboration on hydropower. It will meet under the auspices of the World Hydropower Congress.

Forthcoming reports

Hydropower Status Report
The flagship report will show worldwide hydropower capacity and generation data, industry trends and insights from IHA's team of analysts.

Market Report on Hydropower
The latest IEA analysis will assess the role of hydropower and highlight global market and policy trends in the technology between 2021 and 2026.

The Next 850 GW
IHA will identify where there is potential for additional hydropower to meet international targets for new installed capacity.

VIEW OUR EVENTS CALENDAR

Governance

Board of IHA

IHA's Board governs and oversees our association on behalf of our members. The Board serves a two-year term.

The current Board was elected in July 2019, with members taking up their positions in September 2019. The Board is chaired by IHA President Roger Gill.
Learn about the Board

Financial report

The International Hydropower Association (IHA) is a mutual association of members established in 1995. IHA's headquarters are in London, UK, with activities carried out by two not-for-profit companies: International Hydropower Association Ltd and IHA Sustainability Ltd.

Our income derives from a combination of membership fees, external funding for programmes and projects, and revenue from events and sponsorship. We deliver value to members and advance our mission through sustainability, research and policy programmes, alongside outreach and events for members.

Net income	**Outurn**
Membership fees	872,455
Projects	470,863
Training	76,377
Other	52,970
Total net income	**1,472,665**
Expenditure	
Staff expenses	1,307,378
Travel and subsistence	55,116
Administrative	180,362
Communication	45,160
Legal and professional	117,404
Finance	11,020
Total expenditure	**1,716,440**
Surplus/shortfall	**(243,775)**

The above charts provide an overview of IHA's total revenue and expenditure in the 12 month period to 30 September 2020, in GBP. The accounts are designed to break even over a two year period. The 2020/21 accounts are budgeted to make up the shortfall especially with revenue from the Congress

In the words of our members

Celebrating 25 years of IHA

“IHA has made a significant difference over the past 25 years in bringing together key players of the hydropower sector through a strong platform to foster partnerships, consolidate efforts and progress our shared objectives.”

Sarawak Energy

“IHA’s efforts on sustainability have improved both the preparation and construction of new hydropower projects and the operation of existing hydropower projects.”

Landsvirkjun

“We greatly value IHA’s role and its record of providing industry leadership for its members and developing standards for best practice and frameworks for policy and regulatory advancement.”

Hydro Tasmania

“IHA has led the way in defining and guiding what sustainable hydropower means and how it can be implemented.”

REH Group

“Over the past 25 years, as an international organisation for the hydropower sector, IHA has actively spoken out for sustainable hydropower and promoted its rapid development.”

Yalong River Hydropower Development Company

VIEW OUR MEMBERS DIRECTORY

IHA is the operating name of International Hydropower Association Limited, a not-for-profit company limited by guarantee incorporated in England (number 8656160).

Contact us
We have moved office. Our new address is:

International Hydropower Association (IHA)
One Canada Square
London
E14 5AA
United Kingdom

Email:
General enquiries: iha@hydropower.org

CEO: eddie.rich@hydropower.org

Membership: membership@hydropower.org

Hydropower Pro: pro@hydropower.org

Sustainability: sustainability@hydropower.org

Communications: communications@hydropower.org

Congress: congress@hydropower.org