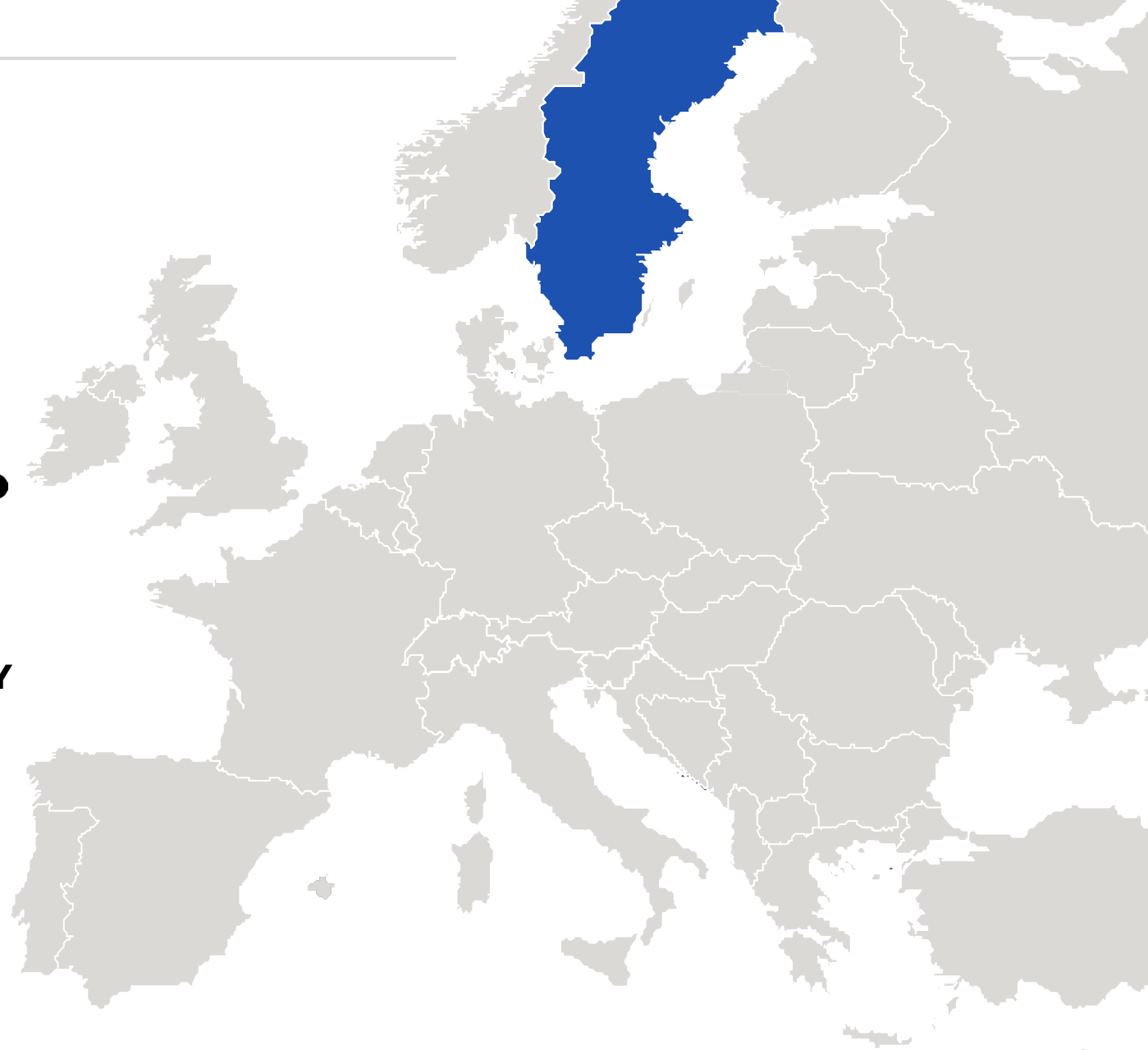


THINK RE

GUARANTEES OF ORIGIN – SALES STRATEGY

September 2022



INVESTIGATING THE MARKET FOR GUARANTEES OF ORIGIN

Introduction

Aim / Structure of the Study

This Study was developed by Think RE GmbH for investigating the Guarantees of Origin (GoO) market in Sweden. Therefore, the document is divided into four chapters without registers and appendix.

Chap. 1 summarizes the results of the study in terms of the main price drivers, provides a brief overview of the current indicative prices in selected analyzed countries, and highlights strategic implications for the sale of Guarantees of Origin.

Chap. 2 discusses regulatory trends in the market for Guarantees of Origin. This chapter provides an overview of the most important regulatory market developments and briefly discusses future development opportunities.

Chap. 3 analyzes the general price drivers for Guarantees of Origin. In particular, environmental influences, RE technology and regulatory conditions in a market are identified as the main price drivers.

Chap. 4 covers the market for Guarantees of Origin in Sweden in detail. The process of issuance, transfer and cancellation of GoOs is covered. Where the information is available, an overview of transaction volumes and prices is provided. Possible sales channels are identified.

INVESTIGATING THE MARKET FOR GUARANTEES OF ORIGIN

Introduction

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Agenda

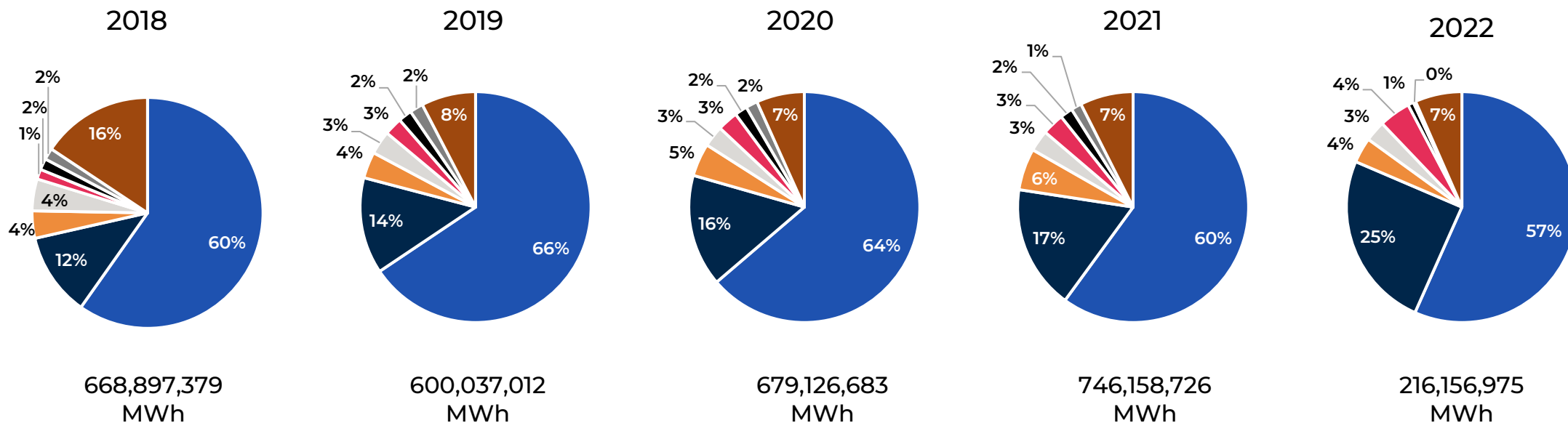
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3. GENERAL PRICE DRIVERS

RE Technology

Shares of RE Technologies in the issued certificate volume 2018 – 2022

- Hydro/marine
- Wind - onshore
- Solar
- Wind - unknown
- Wind - offshore
- Gas - other biogas
- Geothermal
- others



- Despite a declining share of the total number of certificates issued, the GoO market in Europe is still dominated by hydropower. Until mid 2022, its share of the total number of certificates issued was 57%.
- Due to the importance of the price for hydropower GoOs as a base price, precipitation levels, which influence the availability of hydropower, have an important impact on the general price development in the European market.
- From May and throughout the summer of 2018, drought as well as record-breaking and persistently high temperatures prevailed in northern and parts of central Europe. As early as June, the volume of water in Nordic reservoirs for hydropower fell well below normal, which, together with high fuel prices, resulted in electricity prices in July and August being the highest in 20 years. Due to the drought, comparatively few certificates were issued from hydropower (60%) leading to a slight increase in GoO prices (see the following slide).



4. COUNTRY-SPECIFIC ANALYSIS

Sweden

Requesting and Issuing Guarantees of Origin (GoOs) (1/2)

- In Sweden, GoOs are issued either as national GoOs or as EECS GoOs. The two systems for national GoOs and EECS GoOs are kept separate and a national GoO is not allowed to be converted into an EECS GoO or vice versa.
- Account holders who are not EECS account holders will be issued Swedish National GoOs and are not allowed to hold EECS GoOs on their accounts.
- Neither national nor EECS account holders are allowed to export national GoOs.
- The following table describes the entitlements of both types of account holders with respect to national and EECS GOs:

	NATIONAL ACCOUNT HOLDER	EECS ACCOUNT HOLDER
Register Production Device for National GoO system	Yes	Yes
Register Production Device for EECS-GoO	No	Yes
Hold national GoOs	Yes	Yes
Hold EECS-GoOs	No	Yes
Export national GoOs	No	No
Export EECS-GoOs	No	Yes
Import EECS-GoOs	No	Yes
Cancel national GoOs	Yes	Yes
Cancel EECS GoOs	No	Yes