

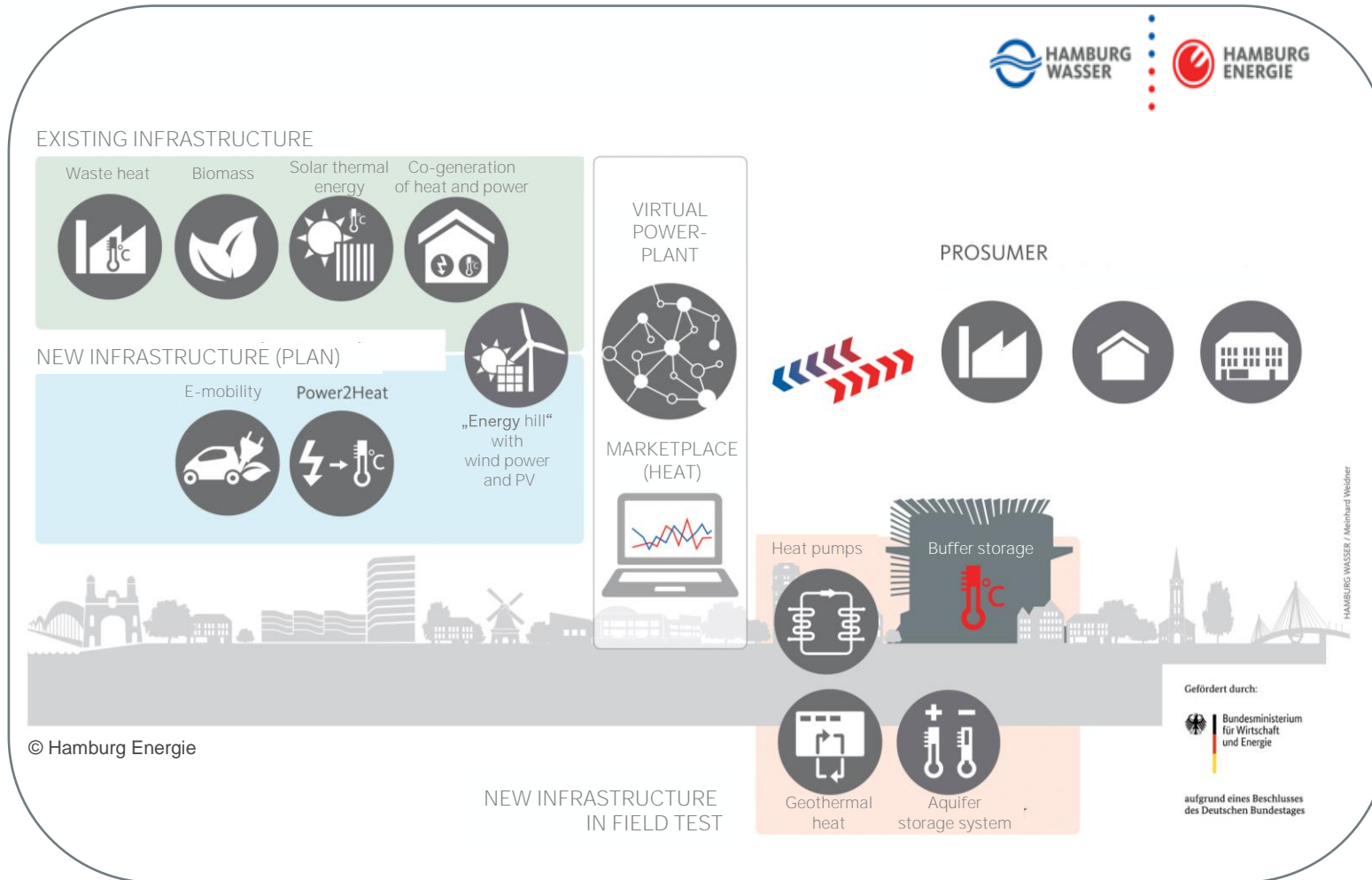
GREEN DISTRICT HEATING

PART OF THE ENERGY TRANSITION LABORATORY IW³ –
INTEGRIERTE WÄRMEWENDE WILHELMSBURG

Issuing Body Webinar
Guarantees of Origin for Heating and Cooling

Christian Maaß | Hamburg Institut | 09.12.2021

IW³ – INTEGRIERTE WÄRMEWENDE WILHELMSBURG (INTEGRATED HEATING TRANSITION WILHELMSBURG)



- **Aim:** Implementation of a sustainable, affordable and sectorally integrated heating supply
- **Partners:** HAMBURG ENERGIE GmbH (Lead), Hamburg Energie Geothermie GmbH (HEGeo), CONSULAQUA mbH, Hamburg University of Applied Sciences (HAW), Christian-Albrechts-Universität (Kiel University, CAU), HIR Hamburg Institut Research gGmbH
- **Funding:** Reallabore der Energiewende (Regulatory sandboxes – testing environments for innovation and regulation)
 - Gefördert durch:
 - Bundesministerium für Wirtschaft und Energie
 - aufgrund eines Beschlusses des Deutschen Bundestages
- **Duration:** August 2020 – July 2024

IW³ IS A PIONEER PROJECT AIMING AT A TRANSPARENT, EASY AND MORE VALUABLE DISTRIBUTION OF SUSTAINABLE DISTRICT HEATING

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Marketplace for heating (HAMBURG UNIVERSITY OF APPLIED SCIENCES HAW)

- Development and technical realisation
- Real-life test in heating grid in Hamburg Wilhelmsburg (operated by Hamburg Energie)

Real-time verification of CO₂ via blockchain (HAMBURG ENERGIE)

- Research and development for a practicable energy and CO₂ verification in real time.
- Marketing via blockchain-capable smart meter infrastructure

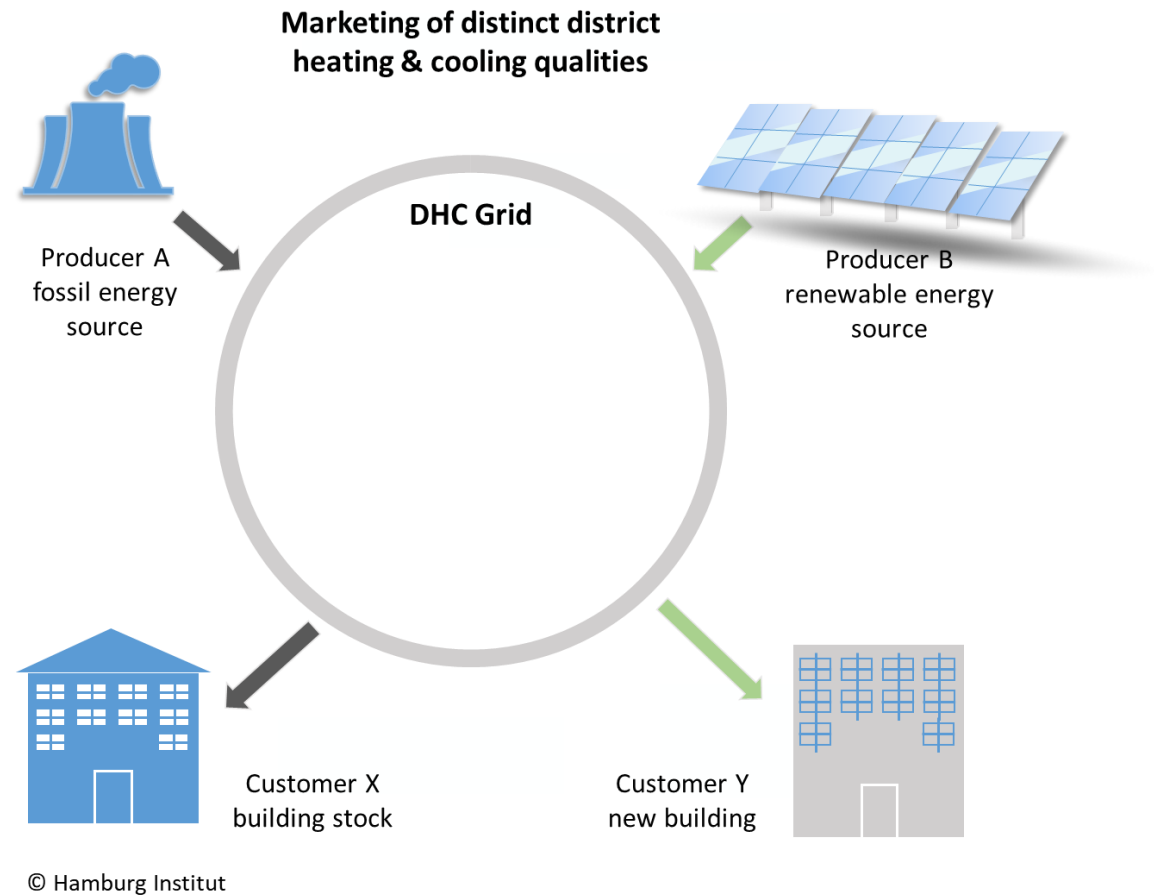
Green district heating (HAMBURG INSTITUT)

- Development and realisation of a pilot guarantee of origin registry for sustainable heating and cooling
- Aim: Allowing for a better marketing of certified green district heating and cooling at a higher value

IW³ subprojects on innovative heat marketing (more info: <https://www.iw3-hamburg.de/waermemarktplatz/>)

AIMS OF THE IW³ SUB-PROJECT GREEN DISTRICT HEATING

- **Project aim:** Development and implementation of a guarantee of origin registry for sustainable district heating and cooling
- **Marketing of green DHC** as a distinct product can attract consumers and provide extra revenue, which can be used to refinance renewable and waste DHC projects
- **Accounting and transparent allocation of green DHC** to buildings und districts
- Analysis of **application options:**
 - Proving fulfilment of **legal requirements** (e.g. on primary energy consumption of buildings)
 - Provide evidence for funding programmes
- **Pilot project** for Germany



APPROACH

- Transfer of **experiences from the green electricity market**: legally secure tracking of green attributes of marketed district heating and cooling
- Analysis of the **energy economic, regulatory and technical framework conditions**
- **Exchange with stakeholders** on supply and consumption sides
- Implementation of a **software-based GO registry** (technical implementation by Grexel Systems)
- **Evaluation of experiences from** the use and operation of the Registry
- Analysis of **further regulatory development options** for a building- or product-specific calculation of primary energy factors (PEFs)

- **Pilot project for Germany**: findings can be incorporated into the implementation of Article 19 of the Renewable Energies Directive (EU) 2018/2001 (RED II)

- The Hamburg Institut is a consulting and research company with a focus on the energy and environmental sector. Since 2012, it has been supporting ministries, municipalities, energy industry companies, associations and other national and international stakeholders in the successful implementation of the energy transition. The Hamburg Institut pools long-standing expertise from politics, administration, business, law and technology and offers interdisciplinary research work in addition to consulting and strategy development. Since 2019, the Hamburg Institut has been part of the Averdung Ingenieure & Berater GmbH company group. More info: <https://www.hamburg-institut.com/en>
- Selected **projects and activities on guarantees of origin:**
 - **GO4Industry**: Prospects for the use of guarantees of origin in industry (Nov. 2020 - May 2022, funded by the Federal Ministry for the Environment (BMU), cooperation partner: GreenGasAdvisors)
 - **Regional green electricity in electricity disclosure** (April 2020 - May 2021, commissioned by German Environment Agency (UBA), cooperation partner: imug)
 - **Market analysis of green electricity and GOs** (2017 - 2019, commissioned by: German Environment Agency (UBA), cooperation partners: IZES, imug)
 - Participation in the **revision of the guarantee of origin standard EN 16325** (Dr. Alexandra Styles): Member of the DIN working group, co-chair of the Project Team Heating & Cooling at CEN/CENELEC JTC 14 Working Group 5 "Guarantees of Origin related to energy"

GOALS AND PROGRAMME OF THE WEBINAR

- Presentations:
 - Legal framework conditions for extending Guarantees of Origin to heating and cooling (Jonathan Claas-Reuther, Hamburg Institut, Senior Consultant)
 - Design options for a Guarantees of Origin system for heating and cooling (Dr. Alexandra Styles, Hamburg Institut, Senior Researcher)
 - How do IT systems support GOs for new energy carriers? (Laura Malinen, Grexel, Project manager)
- Discussion of heating & cooling GO system and registry design options with Issuing Body experts and experts of CEN/CENELEC JTC 14 Working Group 5 „Guarantees of Origin related to energy“

Thank you for your interest!

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