

# Blockchain for Renewable Energy Market

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### Transforming Climate Finance and Green Investment with Blockchains

Edited by Alastair Marke



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Transforming Climate Finance and Green Investment with Blockchains



Blockchain Climate Institute



#### **VISION**

- ► Extensive deployment of Blockchain and other emerging digital technologies such as AI and the IoT in state and nonstate climate and sustainability actions
- ► A not-for-profit entity combining the functions of a think tank and an advisory group supporting G77 countries in climate change policy development in the digital era

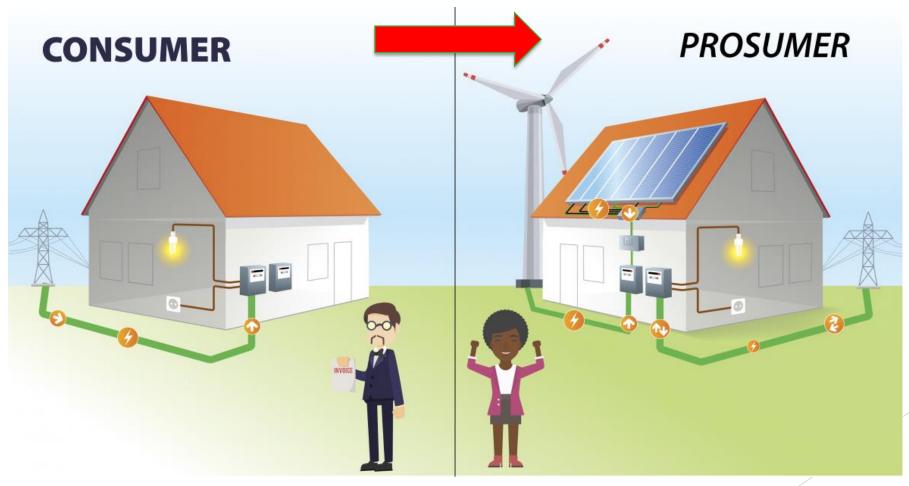
#### **MISSION**

- To raise awareness among stakeholders in the international climate change policy community of the tremendous potentials of Blockchain and emerging digital technologies to considerably enhance climate actions at multiple levels
- ▶ To provide a 'super scaling' platform among policy-makers, corporate executives and Blockchain innovators for experimenting and adopting the most viable concepts in an enabling environment





# **Electricity market trend**





"To be sure, reaching the goal of 100 percent renewable and truly clean electricity within 10 years will require us to overcome many obstacles... Today, our grids are antiquated, fragile, and vulnerable to cascading failure. Power outages and defects in the current grid system cost US businesses more than \$120 billion dollars a year. It has to be upgraded anyway."

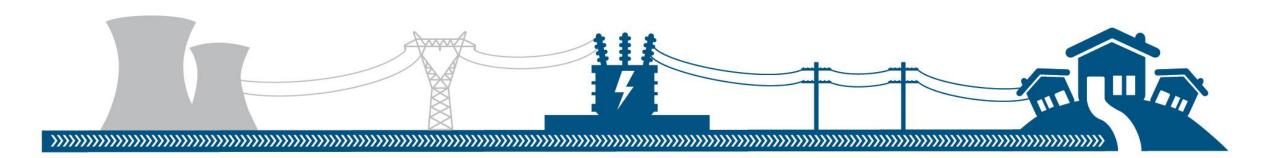
Al Gore, speech at Constitution Hall in Washington DC, 17 July 2008



Problem 1: UNI-DIRECTIONAL GRID DESIGN

Problem 2: RENEWABLE ENERGY FINANCE GAP

#### UNIDIRECTIONAL TRADITIONAL GRID





## Blockchain to turbo-charge renewable energy

- ► Transaction processing technology
- ► Three key features:
  - Distributed ledger
  - > Smart contracts
  - > Consensus algorithm





# Brooklyn Microgrid by LO3 Energy









### Digital Climate Funding (DCF) Platform



ECOKRAFIT

- A 'blockchain green climate fund' in demonstration
- Accreditation process for energy developers, funders and investors
- ► Virtual technical assistance for project development
- ► Machine Learning (subset of AI) to speed-match investors and energy project developers and recommend the most suitable financing model
- Distributed Ledger Technology to automate payment, monitoring and evaluation



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