

# EMISSION-FREE FUTURE NOW AVAILABLE.

## NEO-CARBON ENABLING NEO-GROWTH SOCIETY: Transformative Energy Futures 2050 (NEO-FORE)

The Neo-Carbon Energy research project examines a wholly renewable energy system with hydrocarbon storages. The foresight part of the project (NEO-FORE) anticipates socio-economic implications of the new energy system. As the energy system would be distributed and provide energy at low costs, it would promote a peer-to-peer society of grassroots organizations and energy production.

The societal aspects of the peer-to-peer energy transition are explored through four transformational scenarios in 2050.

- Radical Startups – society is organised around startups, which serve social and cultural goals besides economic ones
- Value-Driven Techemoths – large technology companies, with a peer-to-peer ethos, have become “states within states”
- Green DIY Engineers – citizens have organised as local communities to survive an ecological collapse
- New Consciousness – shared identities replace individualism. Robotisation and AI have enabled a self-actualizing economy



SOLAR AND WIND



NEOCARBONIZATION



ENERGY STORAGE



POWER TO PEOPLE

Neo-Carbon Energy (2014–2017) is one of the Tekes strategy research openings, carried out in cooperation with the Technical Research Centre of Finland VTT Ltd, Lappeenranta University of Technology LUT, and Finland Futures Research Centre FFRC.

#### What is Neo-Carbon?

In the neo-carbon energy system, solar and wind technologies produce energy that is stored in synthetic methane or other synthetic hydrocarbons. Carbon dioxide captured from air and hydrogen can also be used to produce basically all the chemicals and materials now produced from oil. The society as a whole will be affected by this new distributed production of energy and materials.

The foresight focus of the project is on the economic, political, cultural and social changes related to the neo-carbon energy system. Potential socio-economic consequences and prerequisites of the neo-carbon energy system are anticipated. China and countries from Africa and Latin America are included as case studies.

#### What is Neo-Growth?

A neo-carbon energy system can provide the material basis for the future network society and economy based on co-creativity, ecological lifestyles, and new low-carbon practices and technologies. Growth should be defined anew – so that it is environmentally sustainable, and instead of conventional economic goals serves the overall well-being of citizens.

#### Publications

CLA Game Report – Causal Layered Analysis Game on Neo-Carbon Energy Scenarios:

[https://www.utu.fi/fi/yksikot/ffrc/julkaisut/e-tutu/Documents/eBook\\_12-2015.pdf](https://www.utu.fi/fi/yksikot/ffrc/julkaisut/e-tutu/Documents/eBook_12-2015.pdf)

Continuous Transformation and Neo-Carbon Energy Scenarios.

[http://www.utu.fi/fi/yksikot/ffrc/julkaisut/e-tutu/Documents/eBook\\_10-2015.pdf](http://www.utu.fi/fi/yksikot/ffrc/julkaisut/e-tutu/Documents/eBook_10-2015.pdf)

Towards the Third Industrial Revolution. Neo-Carbon Energy Futures Clinique I

<https://www.utu.fi/fi/yksikot/ffrc/julkaisut/e-tutu/Documents/FFRC-eBook-6-2015.pdf>

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Neo-Carbon Energy foresight work

<http://www.utu.fi/en/units/ffrc/research/projects/energy/Pages/neo-fore.aspx>

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Home page: [www.neocarbonenergy.fi](http://www.neocarbonenergy.fi)