Pathways to Sustainable Energy: Project Kick-off and Scenario Scoping

09:00-10:30, 14 June 2017

Workshop
Terminology for the Sustainable Development Goals: Locking in a Sustainable Trajectory
09:00-10:30, 14 June 2017

Moderator

- **Ms. Stefanie Held**, Section Chief, Sustainable Energy, Sustainable Energy Division, UNECE

Presentation: Project Overview; Conceptualising the project: Storylines, Scenarios, and Target Definition

- **Ms. Lisa Tinschert**, Project Manager, Pathways to Sustainable Energy Project, United Nations Economic Commission for Europe (UNECE)
Discussion: Hearing from the experts: What matters towards 2050? And how can it be modelled?

- Comments and reactions to the overview provided
- Which research questions, case studies and deep dives should be included in the modelling?
- Which other drivers and indicators should be included in the modelling?
- How to ensure maximum stakeholder engagement over the project timeframe? - Workshops, dialogues and consultations with countries and experts
- Further recommendations for the project
Focal question: How can countries attain sustainable energy?

- Role of FF in a future sustainable energy system
- Methane leakage from extraction, transmission, distribution
- Competitiveness of RE compared to FF; synergies of RE & FF; RE grid-integration; RE and Gas
- Energy efficiency policies as enabler for other policies / holistic approach
- Investment requirements to attain certain level of RE, changing of investment patterns for transition towards SE system
- Quantum leap of technologies: Technologies as game changer
- Sub-regional topics to be defined
- Others
Building the Scenarios, based on SSP2
Indicators (Output)

- **Indicators**
  - Final energy intensity (SDG7)
  - Carbon intensity (SDG13)
  - Carbon budget (temperature change)
  - Energy prices
  - Share of RE (SDG7)
  - Investment requirements (SDG7)
  - Energy imports and exports
  - Food prices / consumption (SDG2)
  - Energy access (energy use?) (SDG7)
  - Water use of energy sector (SDG6)
  - Pollutants (SDG9)
Building the Scenarios, based on SSP2 Drivers (Input)

- **Meta Drivers** (underlying characteristics of energy system)
  - International Cooperation (degree of openness to trade)
  - Innovation (technology costs development, changes in efficiency, business models)

- **Drivers (Range definitions)**
  - Energy efficiency (end-use, conversion)
  - Energy Storage
  - Electric Vehicles
  - Abundance of fossil fuels (all types), extraction costs
  - CCS (incl. BECCS)
  - Power to X (efficiency, CapEx)
  - Nuclear
  - Renewable energies (BM, non-BM, system integration, CapEx, efficiency)

- **Policies**
  - Subsidies (carbon price, taxes, etc.)
**Project Management Discussion**

**DRAFT Timeline Implementation**

**ENERGY**

- **Expert Workshop at CSE - tbc**
  - Geneva, Sep 2017

- **Modeler Kick-off Workshop**
  - Oberhausen, May 2017

- **Kick-off & Expert Workshop at 8th IFESD**
  - Astana, Jun 2017

- **Expert Workshop - tbc**
  - Discuss technology & policy options
  - tbd, Q1-Q2 2018

- **Expert Workshop at 9th IFESD**
  - Derive / discuss policy options / pathways
  - Ukraine, Q3 2018

- **Policy Dialogue at CSE**
  - Discuss policy options & pathways
  - Geneva, Sep 2018

- **High-level Political Dialogue**
  - Russia (tbc), Q1 (2019)

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CSE = Committee on Sustainable Energy
Pathways to Sustainable Energy: Policy & Technology Options to Achieve Sustainable Energy

11:00-12:30, 14 June 2017

Workshop
Moderator

- **Ms. Stefanie Held**, Section Chief, Sustainable Energy, Sustainable Energy Division, UNECE

Presentation: Framing the Target: Sustainable Energy in 2050

- **Ms. Lisa Tinschert**, Project Manager, Pathways to Sustainable Energy Project, United Nations Economic Commission for Europe (UNECE)
Country Presentations: Sustainable Energy Futures

- **Mr. Aleksandar Dukosvki**, Director, Energy Agency, FYR of Macedonia
- **Mr. Artan Leskoviku**, Director of Energy, National Agency of Natural Resources, Albania
- **Mr. Mikhail Malashanka**, Vice Chairman, State Committee on Standardization, Director Energy Efficiency Department, Belarus
Discussion: National Perspective on Sustainable Energy

• What is energy for sustainable development? How do countries interpret sustainable energy?
• Agenda 2030 and the Paris Agreement: How do countries implement global targets? How to meet different priorities?
• Looking at the possible pathways ahead: What are policy options to achieve the set target? How can cross-cutting themes be aligned with different national priorities?
• How to create holistic policy frameworks (adaptive, flexible)?
• How can regional cooperation help achieving sustainable energy?
• What are the consequences for early-warning systems (national, regional and global)? Which systems exist? What is their role? How could these be applied?
Discussion Starter: What are adaptive policy pathways?

• The authors of DAPP (Dynamic Adaptive Policy Pathways) approach state, that “a pathway is a sequence of policy actions to reach specified objectives”

• What is meant by „sequence of policy actions“? A portfolio of potential policy actions and rules of their application in future situations – in any case it means generation of concrete dynamic energy policy option
Target Definition: Sustainable Energy
Draft: 3 Components

- Energy affordability
- Jobs
- Health
- ...

Energy Security

- Supply to meet demand (but differing conceptualisations)
- ...

Sustainable Energy

- Air pollution control
- Climate commitments
- ...

Quality of Life

Environmental Sustainability
Energy Security

As a component to conceptualize sustainable energy

- Qualitative / Quantitative description
  - Final energy intensity (SDG7)
  - Share of RE (SDG7) (environmental sustainability?)
  - Investment requirements (SDG7)
  - Energy imports and exports
  - Energy prices (oil price)

Other important
- Indicators
- -qualitative aspects?
Environmental Sustainability
As a component to conceptualize sustainable energy

- Qualitative / Quantitative description
  - Carbon intensity (SDG13)
  - Carbon budget (temperature change)
  - Water use of energy sector (SDG6)
  - Pollutants (SDG9)

Other important
- Indicators
- Qualitative aspects?
Quality of Life
As a component to conceptualize sustainable energy

- Qualitative / Quantitative description
  - Energy prices (end-consumer: electricity, heating, cooling, transport)
  - Food prices / consumption (SDG2)
  - Energy access (energy use?) (SDG7) (energy security?)

Other important
- Indicators
- - qualitative aspects?