Updated Regulatory Framework: REDII review

Shallow Geothermal Energy Days

Eva Hoos, ENER C1, 14.06.2022
Independence from Russian fossil fuels by 2027

- Increase imports of liquefied natural gas (LNG) by 50 bcm
- Increase pipeline gas imports by 10 bcm
- Increase biomethane production by 3.5 bcm
- EU-wide energy saving to cut gas demand by 14 bcm
- Rooftop solar to reduce gas demand by 2.5 bcm
- Heat pumps to reduce gas demand by 1.5 bcm
- Reduce gas demand in the power sector by 20 bcm by deployment of wind and solar

Increase the target of renewable energy from 40% to 45% by 2030
Increase the target of energy savings from 9% to 13% by 2030
Increasing renewables share: Permitting (i)

Issues to address

- Length and complexity of administrative authorisation procedures
- Grid connection issues
- Constraints on adapting technology specifications during the permit granting procedure
- Staffing and skilling of permit-granting entities and authorities
Increasing renewables share: Permitting (ii)

- Commission guidance on good/best practices
- Recommendation on speeding up permitting-granting procedures and facilitating Power Purchase Agreements
- Amendment of RED II on permitting - establishing "renewable go-to areas": areas where environmental impact has been identified as low.

Solutions proposed
Solar: four flagship initiatives

- EU Solar Rooftops Initiative
  - EU large-scale skills partnership for onshore renewable energy, including solar energy
- EU Solar PV Industry Alliance
  - Permitting package – legislative proposal, Recommendation and guidance
- EU Solar: four flagship initiatives
**REDII proposal: Mainstreaming renewable energy in buildings**

Target for 49% share of energy from renewable sources in the buildings sector in the Union’s final consumption of energy in 2030

The benchmark is not binding: aim is to ensure policy focus on renewable supply in buildings

- Increase" the share of RES-HC by 1.1pp/year
- Technical adjustment for the RES-HC annual share increase when waste heat/cold can be accounted for from 1.3 pp to 1.5 pp. Ceiling of 40% remains
- Additional indicative national top ups with the resulting overall annual RES-HC share increases
- Strengthen national assessments of RES & waste heat/cold potentials for H&C
- Extended list of measures to use to overcome non-market barriers

Current Renewable share in buildings is around 28%, well-below its cost-effective level
Proposal REDII review – Shifting to modern, consumer based DHC & Buildings

District Heating and Cooling:
- Increased indicative target to 2.1 percentage point
- Stronger consumer information and network access requirements
- Stronger coordination with other energy networks to facilitate system integration
- Coordination framework to harness the potential sources of waste heat and cold

Buildings:
- 49% renewable energy benchmark to monitor efforts and progress
- Training and skills
- Complementary to EED and EPBD

Enabling framework for waste heat and ESI
Strengthening and enabling DHC role in Energy System Integration by requirements to establish national frameworks:
- for waste heat/cold utilisation (paragraph 6 of Article 24);
- for cooperation with electricity, gas and other energy grids (paragraph 8 of Article 24).
RepowerEU: Double HP deployment rate & develop district heating to replace fossil fuels

- 30 million newly installed heat pumps in 2030, 10 million units in the next 5 years
- Develop, modernise district heating systems, which can replace fossil fuels in individual heating, especially in densely populated areas and cities, to accelerate the deployment and integration of: 1) large-scale heat pumps, 2) geothermal and 3) solar thermal energy
- Develop clean communal heating
- Exploit industrial heat whenever available.
Buildings: seeking the right balance between energy efficiency and renewable systems

The Energy Performance of Buildings Directive aims to improve the energy performance by reduction of energy demand & use of RES

Renewable energy plays a major role in:
- The calculation of cost-optimal levels of minimum requirements
- The definition of nearly zero-energy buildings
- The calculation of energy performance
- The determination of Primary Energy Factors
Decarbonisation of the buildings stock:

- building renovation
- on-building renewable energy
- renewable energy from the system

- The energy produced on-building reduces the primary energy associated with the delivered energy. In this way, on-site renewables are always part of the calculation of the energy performance of the building.
- Off-site renewable energy (for instance in the electricity network mix when electricity is the energy carrier) will affect the energy performance of the building through primary energy factors.
- Treatment of RES on a non-discriminatory basis: RES consumed by the building, whether on-site or off-site, improves the energy performance of the building.
- The use of RES should be encouraged in conjunction with seeking energy savings from the building envelope and its technical building systems.
New vision for the buildings of the future:

Basic principles

- Fit for the decarbonisation agenda
- Better than NZEB levels
- Energy efficiency first principle: beyond cost-optimality (?)
- Beyond energy performance and primary energy use
- Zero-emission
- Energy from renewable sources
- No fossil fuels
Proposal under the revision of the EPBD:
zero emission buildings

- Has a very high energy performance, meeting specific thresholds for its total primary energy use
- The very low amount of energy still required is fully covered by energy from renewable sources
  - generated on-site, from a renewable energy community, from a district heating and cooling system using only renewable energy and waste heat
- The net non-renewable primary energy use shall be maximum zero
- Must not cause any on-site carbon emissions from fossil fuels
- Considering lifecycle emissions - Global Warming Potential

As of 1 January 2030, all new buildings should be zero-emission buildings.
As of 1 January 2027 all new buildings occupied or owned by public authorities
Financing and delivery of the RepowerEU

Mobilising the available EU Funds

- Next Generation EU including Recovery and Resilience Facility*, MFF (Cohesion policy funds, InvestEU, LIFE, CEF …) and EU ETS Funds (Modernization and Innovation Funds)

- Technical assistance

- to complement national, private funding, IFIs support and

- to be implemented by the Member States

* Including additional funding from the EU ETS and voluntary transfers possibilities from the Cohesion policy funds and EAFRD
Thank you