



European Energy Network

## **Smart sector Integration in the EnR network**

**Assessment of implementation status,  
opportunities, challenges and priorities**

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## Smart Sector Integration & the EnR network

### Smart Sector Integration is:

- Essential for reaching **climate neutrality** in an effective way
  - Enabling the Renovation Wave and Just Transition
  - Crucial for the **European Green Deal**
  - Multi-directional, top-down and bottom up, with **vertical integration** ((local) governments, producers and consumers) and **horizontal integration** (between sectors)
  - Becoming a priority for most countries and agencies
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## Smart Sector Integration & the EnR network

### Smart Sector Integration is:

- Only at **energy agencies** the sectoral policy instruments and the cross-sectoral knowledge and networks come together
  - **EnR agencies** are all tasked with facilitating integrated energy systems, pre-selecting business cases e.g. for the EIB
  - Agencies are learning **valuable lessons** about smart sector integration
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EnR



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## Assessment of implementation status, opportunities, challenges and priorities

- **Task force** to provide more insights into EnR member activities
  - **Analysis** based on information by members:
    - Homework
    - Interviews
    - Task force discussions
    - Thinking group meeting
  - **Report** to present overview of common opportunities, challenges, priorities
  - Suggestions for **follow-up** activities
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## Smart Sector Integration in EnR countries

### Countries:

- Have made smart sector integration a **core part** of sustainable energy plans / climate strategies
  - Build on **past experience** with district heating, waste heat use, renewable energy integration, electrification
  - Link smart sector **integration** to urban development and industrial areas
  - Connect **transport** with urban and renewable energy
  - Integrate **economic and energy** developments
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# Opportunities & Challenges for Smart sector Integration

## Eight opportunities & challenges identified

### 1. New business models

**Opportunity:** expand commercial potential of energy transition

**Challenge:** little experience with business models across sectoral borders and rewarding societal benefits

### 2. Regulatory restrictions and sandboxes

**Opportunity:** test new regulatory systems

**Challenge:** redefining regulations needed to serve public goals and safeguarding interests of all parties



## Opportunities & Challenges for Smart sector Integration

**Eight opportunities & challenges identified**

### **3. The role of energy communities**

**Opportunity:** provide a structure for new forms of organisation

**Challenge:** structures underdeveloped, little experience with business risks and communities need facilitation to absorb lessons and find effective forms of organisation

### **4. Problem owner and conveyor of parties**

**Opportunity:** Opportunities for many parties

**Challenge:** No automatic mandate, no coordination, no natural source of funding for initiatives



## Opportunities & Challenges for Smart sector Integration

### Eight opportunities & challenges identified

#### 5. Blending public and private investments

**Opportunity:** Increased effectiveness, new possibilities

**Challenge:** Non-aligned rules for different types of investment, no mechanism for allocating benefits and losses

#### 6. The role of (heat) networks

**Opportunity:** New collaborations, new forms of energy and financial optimisation

**Challenge:** Lack of regulatory framework, poor fit with normal regulations for utilities



## Opportunities & Challenges for Smart sector Integration

### Eight opportunities & challenges identified

#### 7. Diversification of energy carriers and e-fuels

**Opportunity:** New opportunities exchange, store and use renewable energy

**Challenge:** Technology and business models being developed

#### 8. Social justice in energy transition


**Opportunity:** Shifting boundaries between public and private investments, creating new ways to include all parts of society

**Challenge:** No policy or business framework for rebalancing investments

## Conclusions: Priorities for continued development

1. Researching and piloting new business models
  - Risk & benefit allocation
  - Boundaries public – private
  - Crossing sectoral boundaries
  - Legal and regulatory barriers
2. Key role of local energy exchange networks
  - Which networks where, for which sectors?
  - Public and private interests in exchange networks
  - Financing: who, when, for how long?
  - Regulatory regimes?
  - Role of networks for an affordable transition?

## Conclusions: Priorities for continued development

3. Developing the framework for energy communities
    - Need for communities in various sectors?
    - Ways to organise and regulate?
    - Role in inclusiveness and affordability of energy transition?
  4. Finding new ways to assure affordability of decarbonised integrated energy systems
    - Assessing current participation, full spectrum of parties?
    - Investment needs and capacities?
    - Costs and benefits over time?
    - Shifting boundaries benefiting or hindering an affordable transition?
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## Recommendations

- Continue with the **EnR Task Force** on Smart Sector Integration
- Regularly **update country Factsheets** on SSI, (plus reassess opportunities and challenges)
- **Share Final Report** with European and national policy makers and brief them on EnRs shared experiences with Smart Sector Integration



## Recommendations

**Organise** a series of **workshops** on the following priorities:

- New business
- Local energy exchange networks
- Energy communities
- Affordability of decarbonised, integrated energy systems
- Regulatory sandboxes
- Financing methods for smart sector integration
- Stakeholder engagement and coalition building
- The role of new energy fuels



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***Thank you for your attention***