



# dedalus

## Expert Roundtable on Residential Demand Response Policy

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# 1. Introduction

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This second policy session on demand response was held within the framework of the EU Horizon DEDALUS Project. The roundtable brought together a select group of energy policy experts from EU governance, industry and academia to discuss which new EU-level policies can have the most meaningful impact right now – particularly in light of the forthcoming Network Code on Demand Response.

The session was a roundtable with a panel of 5 invited speakers who work within the field of energy policy in the following organisations, companies and projects: ACER, PHLECKS, RHC-ETIP, smartEn, the National Technical University of Athens, and the EU projects DEDALUS and DR-RISE.

## Facilitator:

[Agnes Mlicka](#)

DEDALUS project partner; Development Consultant at European Green Cities, part of BLOXHUB

## Moderators:

[Katerina Sianni](#)

DEDALUS project partner; Data Scientist & Data Visualization Senior Expert at the Energy Policy Unit, National Technical University of Athens

[Dr Jan Schwiderowski](#)

DEDALUS project partner; Innovation & Analytics Consultant at European Green Cities, part of BLOXHUB

## Speakers:

[Dr Athina Tellidou](#)

Policy Officer, Market Codes, Electricity Department at European Union Agency for the Cooperation of Energy Regulators (ACER)

[Quentin Donnette](#)

Policy Analyst in the EU project [DR-RISE](#) (Demand Response – Residential Innovation for a Sustainable Energy system), and Senior Market Analyst at SmartEn - Smart Energy Europe

[Trygve Skjøtskift](#)

CEO and Founder of PHLECKS, International Expert in Demand-Side Flexibility

[Maria Capogreco](#)

Chair of the Horizontal Working Group [HWG] 100% RE Buildings of the Renewable Heating & Cooling European Technology & Innovation Platform [RHC-ETIP]

[Panos Skaloumpakas](#)

DEDALUS project partner; Researcher & Assistant Project Manager, National Technical University of Athens

## 2. Topics

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The speakers will discuss the following 5 potential policy recommendations:

1. **National enforcement of the Implementing Acts on Data Interoperability in the forthcoming Network Code on Demand Response**, to ensure harmonised consumer data exchange across Member States, addressing interoperability barriers that currently prevent scaling of DR solutions.

2. **Enable regulatory sandboxes for demand response.**

This topic also covered:

- Grant full market access to demand-side flexibility across all markets, reducing technical and procedural entry barriers imposed by TSOs and DSOs

3. **Establish clear legal status and rights for independent aggregators.**

This topic also covered:

- Support renewable energy communities as aggregated flexibility providers

4. **Embed social and just transition KPIs in EU DR policy frameworks.**

This topic also covered:

- Protect vulnerable consumers and guaranteeing opt-out rights
- Increase transparency and consumer protection in aggregator contracts

5. **Develop and mandate a dedicated 'IoT for Energy' certification standard covering reliability, DR compatibility, and minimum performance thresholds for residential smart devices.**

This topic also covered:

- Establish a legal and technical pathway allowing Dedicated Measurement Devices (DMDs) and sub-meters to be used for flexibility validation, decoupling DR eligibility from fiscal smart meter rollout
- The potential impact of upcoming National Flexibility Need Assessments

## 3. Discussion

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### 3.1. Topic 1: Data interoperability

#### 3.1.1. Suggested policy recommendation

National enforcement of the Implementing Acts on Data Interoperability in the forthcoming NC DR, to ensure harmonised consumer data exchange across Member States, addressing interoperability barriers that currently prevent scaling of DR solutions.

#### 3.1.2. Key discussion points by speaker

##### Trygve Skjøtskift:

- Advocates for virtual/sub-metering (DMDs) as a practical alternative already working in Denmark.
- Smart meters have historically been central but are too slow, costly and inflexible as the main gateway.
- Data/privacy concerns are manageable with existing solutions (e.g., data hubs, retailer mediation).
- Responsibility for measurement accuracy and coordination should lie with aggregators.
- Warns against over-regulation and micromanagement; market-based responsibility works better.

##### Athina Tellidou:

- Raises concerns from system operators:
- Measurement “noise” from DMDs.
- “Compensation effects” from other household devices.
- Emphasizes need for safeguards and validation mechanisms.
- Highlights ongoing network code discussions to accommodate alternative metering.

##### Quentin Donnette:

- Supports harmonisation but warns against excessive reliance on national implementation.
- Too many elements left to Member States risks repeating past failures in EU directives.
- Calls for stronger pan-European coordination and standardisation.

##### Maria Capogreco:

- Italy is in pilot phase for residential DR (e.g., Rome Flex, Mind Flex).
- Regulatory framework is significantly advancing but DR programs for residential consumers/prosumers are not widespread.
- Aggregation is essential; individual participation is difficult.
- Clear market structure and rules are emerging but not yet mature.

#### 3.1.3. Key implications

- Smart meters alone are insufficient; alternative metering (DMDs) is viable and necessary.
- Strong need for EU-level harmonisation, not fragmented national implementation.
- Aggregators should carry technical responsibility for coordination and performance.

- Residential DR rollout is uneven across countries and still largely experimental.

### 3.1.4. Summary

Interoperable data frameworks are critical but must remain flexible and market-driven. Over-reliance on smart meters and national-level implementation risks slowing progress.

## 3.2. Topic 2: Regulatory sandboxes

### 3.2.1. Suggested policy recommendation

Enable regulatory sandboxes for demand response.

This topic also covered:

Grant full market access to demand-side flexibility across all markets, reducing technical and procedural entry barriers imposed by TSOs and DSOs.

### 3.2.2. Key discussion points by speaker

**Athina Tellidou:**

- Market access barriers (e.g., prequalification) remain significant.
- Sandboxes are essential to test solutions and gather best practices.
- Calls for European-level coordination and knowledge sharing.

**Quentin Donnette:**

- Sandboxes are useful but overdue — market access should already exist.
- Warns against “sandbox accumulation” without strategy.
- Calls for clear objectives and stakeholder alignment.

**Panos Skaloumpakas:**

- Sandboxes should:
  - Allow independent aggregators to test settlements.
  - Enable baseline methodologies without waiting for smart meters.
  - Explore AI-based forecasting and load monitoring.
- Should scale beyond small pilots.

**Maria Capogreco:**

- Sandboxes are ‘living labs’ for testing regulations and technologies.
- Must include all stakeholders and structured methodologies for feedback.

**Trygve Skjøtskift:**

- Danish experience shows:
  - TSOs can successfully run sandboxes with knowledge-sharing requirements.
  - DSOs create more complexity and slower processes.
- Calls for alignment with EU network code.

### 3.2.3. Key implications

- Sandboxes are essential but must be:
  - Strategically designed
  - Scalable

- Connected to policy-making
- Need EU-wide coordination and knowledge transfer.
- Prequalification remains a major bottleneck.

### 3.2.4. Summary

Regulatory sandboxes are vital for innovation but must move beyond isolated pilots to structured, coordinated mechanisms that directly inform EU-wide regulation.

## 3.3. Topic 3: Independent aggregators

### 3.3.1. Suggested policy recommendation

Establish clear legal status and rights for independent aggregators.

This topic also covered:

Support renewable energy communities as aggregated flexibility providers.

### 3.3.2. Key discussion points by speakers

**Quentin Donnette:**

- Independent aggregators are key but lack proper frameworks in many countries.
- Markets with open access (e.g., France, Czech Republic) show strong growth.
- Aggregators should operate without supplier/BRP consent barriers.

**Trygve Skjøtskift:**

- Independent aggregators are the biggest barrier in some markets (e.g., Denmark).
- Incumbents limit competition and delay progress.
- Lack of liquidity and investment due to restricted access.

**Maria Capogreco:**

- Promotes RECs as aggregation models.
- RECs:
  - Enable participation
  - Reduce energy poverty
  - Provide social benefits
- Calls for stronger legislative support at EU level.

**Athina Tellidou:**

- Confirms importance of aggregators but notes:
  - Need for flexible, evolving frameworks.
  - Future European methodologies rather than fixed rules.

### 3.3.3. Key implications

- Independent aggregators are critical enablers of residential DR.
- Market access barriers and incumbent resistance slow adoption.
- RECs offer a socially inclusive aggregation model.
- EU needs clearer, adaptable frameworks.

### 3.3.4. Summary

Unlocking the full potential of demand response depends on empowering independent aggregators and collective models like energy communities through clear, EU-wide frameworks.

## 3.4. Topic 4: Social and just transition

### 3.4.1. Suggested policy recommendation

Embed social and just transition KPIs in EU DR policy frameworks.

This topic also covered:

- Protect vulnerable consumers and guaranteeing opt-out rights
- Increase transparency and consumer protection in aggregator contracts

### 3.4.2. Key discussion points by speaker

**Maria Capogreco:**

- RECs help combat energy poverty and support inclusion.
- Existing EU tools (PPAs, CfDs) provide a good starting point.
- More social innovation needed.

**Panos Skaloumpakas:**

- Social dimension should follow technical/regulatory progress.
- RECs can:
  - Improve engagement
  - Provide fairness via community governance
- Suggests community-level KPIs and management.

**Quentin Donnette:**

- Risk of inequality increase (wealthy vs vulnerable households).
- Recommends:
  - Subsidies
  - Transparent contracts
  - Opt-out rights
  - Protection from penalties

**Trygve Skjøtskift:**

- Dynamic tariffs can penalise vulnerable consumers.
- Flexibility tools benefit those with resources (e.g., EV owners).
- Calls for better TSO-DSO collaboration, coordination and market-based solutions.

**Athina Tellidou:**

- Social aspects not included in network code due to legal limitations.
- Focus remains on wholesale market, not retail/social policy.

### 3.4.3. Key implications

- DR risks increasing inequality without safeguards.
- Strong need for:
  - Consumer protection

- Transparent contracts
  - Targeted subsidies
- Social policy must be addressed outside the network code.

### 3.4.4. Summary

Ensuring fairness in demand response requires dedicated social policies, as current regulatory frameworks do not adequately address vulnerable consumers.

## 3.5. Topic 5: IoT certification and standardisation

### 3.5.1. Suggested policy recommendation

Develop and mandate a dedicated 'IoT for Energy' certification standard covering reliability, DR compatibility, and minimum performance thresholds for residential smart devices.

This topic also covered:

- Establish a legal and technical pathway allowing DMDs and sub-meters to be used for flexibility validation, decoupling DR eligibility from fiscal smart meter rollout
- The potential impact of upcoming National Flexibility Need Assessments

### 3.5.2. Key discussion points by speaker

**Panos Skaloumpakas:**

- Certification of IoT devices is essential for interoperability.
- Suggests:
  - Learning from mature markets
  - Using AI to enhance interoperability across devices

**Maria Capogreco:**

- Calls for clear rules on data exchange and cybersecurity.
- Emphasizes:
  - Data infrastructure frameworks
  - TSO-DSO cooperation
  - Standardised flexibility assessment methodologies

**Trygve Skjøtskift:**

- Existing TSO standards should be reused.
- Avoid over-engineering; aggregators should ensure compliance.

**Quentin Donnette:**

- Supports certification but warns:
  - Risk of ignoring “non-smart” flexible devices.
- Raises concerns about:
  - Underestimation of demand-side flexibility in assessments.

**Athina Tellidou:**

- Certification discussed but not yet implemented in network code.
- Ongoing monitoring to inform future frameworks.

### 3.5.3. Key implications

- Need for device certification and interoperability standards.
- Existing market standards can be leveraged.
- Risk of underestimating flexibility if frameworks are too narrow.
- Data governance and cybersecurity are critical.

### 3.5.4. Summary

A harmonised certification and data framework is essential to scale demand response, but must remain flexible and inclusive of diverse technologies.

## 4. Summary

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Residential demand response in Europe faces interconnected challenges across data interoperability, market access, aggregator frameworks, social inclusion, and technology standards. While technical solutions and pilot initiatives exist, progress is hindered by fragmented national implementation, limited market access, and insufficient support for independent aggregators and vulnerable consumers. A coordinated EU-level approach—combining flexible regulation, strong market design, and inclusive policies—is essential to unlock scalable, fair, and effective demand-side flexibility.