The concept of “regulatory innovation zones” and the German SINTEG ordinance

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3rd National Stakeholders Coordination Group Meeting
Malmö, 22 May 2018
Regulatory innovation zone as regulatory experiment

Energy transformation requires dynamic adaptation of the regulatory framework.

- Different regulatory options exist.
- Practical implementation and effects of new regulation often not clear.

Regulation as innovation

- Not just technology, but also regulation develops in an innovation process and can be tested.

† Regulatory innovation zone as laboratory for new regulation before it is rolled out.

See Smart Grids-Roadmap Baden-Württemberg (in German)
Regulatory innovation zone: Basic principles

● What it should be:
  - an instrument for developing the regulatory framework
  - a clearly defined and fixed-term R&D project

What it should not be:
  - a legal vacuum
  - a mechanism to promote specific technical innovations
  - a subsidy for business models that are not economically viable

● Examples:
  - Past: Pilot auctions for renewables in Germany: Different auctions designs were tested.
  - Future: Development of platforms for flexibility for the network operator
Regulatory innovation zone: Basic principles

Starting point
Question of systemic relevance and need for testing regulatory options

Regulatory option I

Regulatory option II

Regulatory option III

Result:
• Practical effects of regulatory options
  • Processes, incentives etc.
• Proposal for developing the regulatory framework
### Types of regulatory experiments

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<tr>
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<th>I. Pilot project / innovation lab</th>
<th>II. Pilot project / innovation lab with regulatory support</th>
<th>III. Regulatory innovation zone</th>
<th>IV. System innovation zone</th>
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<tbody>
<tr>
<td><strong>Goal / focus</strong></td>
<td>Testing technical, social or socio-technical innovations</td>
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<td>Testing regulatory innovations (new or modified policy instruments)</td>
<td>Testing system innovations (co-evolution of technical, social and regulatory change)</td>
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<td><strong>Role of regulation</strong></td>
<td>Existing rules as given framework conditions.</td>
<td>Enabling role through regulatory exemptions</td>
<td>New rules and their impact as main research objects.</td>
<td>Interaction between socio-technical change and regulation as research object.</td>
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<td><strong>Typical technical demonstration project</strong></td>
<td>SINTEG-Ordinance Germany</td>
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# Requirements and challenges

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<th>Requirement</th>
<th>Challenge</th>
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<tr>
<td>Regulation can typically not be tested without a clear legal basis</td>
<td>e.g. SINTEG Ordinance based on the energy law</td>
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<td>Avoid distortion of competition</td>
<td>Should be treated as other R&amp;D projects</td>
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<td>Investment incentives in fixed-term projects?</td>
<td>New rules extend beyond the project period for the investments made?</td>
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<td>Selection Bias, no statistical analysis</td>
<td>Should be seen as a complement to e.g. models</td>
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<td>Test practical implementation, incl. unintended effects</td>
<td>Compare regulatory options</td>
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<td>What about customer involvement if this cannot be made compulsory?</td>
<td>Involve regulator and other stakeholders</td>
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Germany: SINTEG Ordinance

- “In order to make it possible for the participants of the SINTEG programme to test new technologies, procedures and business models in practice without facing financial disadvantages, the Federal Ministry for Economic Affairs and Energy has developed a fixed-term ordinance, which provides these participants with room for conducting experiments.

- The rules set out under the SINTEG ordinance are not intended to prejudge any future regulation, but rather make it possible to learn from practical tests so that the existing legal framework can be updated.”

Source: https://www.bmwi.de/Redaktion/EN/Artikel/Energy/sinteg-funding-programme.html
When?

- In situations when the network operator needs to take measures to manage network constraints and maintain network security
- In situations when the spot market price becomes zero or negative

For which activities?

- End consumers that provide flexibility that result in higher network charges
- Storage and sector coupling: Compensation for fees and levies
- Compensation for renewables that reduce feed-in with additional consumption
SINTEG Ordinance: How to take it further?

- SINTEG Ordinance provides a good starting point for developing regulatory innovation zones as a next step
- Next step I: Broader participation, not just SINTEG programme
- Next step II: Regulatory experiments instead of retrospective reimbursement
- Next step III: Regulatory experiment as a research project in itself, incl. evaluation and generalisation of results
References (in German)

Concept and legal analysis for the Ministry of the Environment, Climate Protection and the Energy Sector Baden-Württemberg

- https://um.baden-wuerttemberg.de/de/energie/versorgungssicherheit/smart-grids/konzept-riz/
- https://www.beckerbuettnerheld.de/de/article/rechtsgutachten-zur-regulatorischen-innovationszone-riz-vorgelegt/

SINTEG Ordinance

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