





USING EVALUATION FINDINGS TO SUPPORT THE ENERGY TRANSITION – THE 7TH ENERGY RESEARCH PROGRAMME AS A LEARNING PROGRAMME

Energy Evaluation Conference 2025 26.09.2025

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AGENDA





Introduction



The Evaluation`s Learning Cycle



Conducting the Evaluation (with Surprises!)



Conclusions





INTRODUCTION

The 7th Energy Research Programme and its Evaluation





THE 7TH ENERGY RESEARCH PROGRAMME

- The 7th Energy Research Programme (ERP) 'Innovations for the Energy Transition' is pursuing a strategic approach for energy research, focussing on the transfer of technology and innovation.
- The Federal Ministry for Economic Affairs and Climate Action (now: Energy) funded
 - Collaborative FTI Projects (TRL 3-7)
 - Living Labs (TRL 7-9) and Micro Projects
 - Energy Research Networks and Research Communication
- Open calls offer continuous application possibilities

2018 – 2023: 6,500 projects with funding of € 3,318 bn.



THE EVALUATION APPROACH

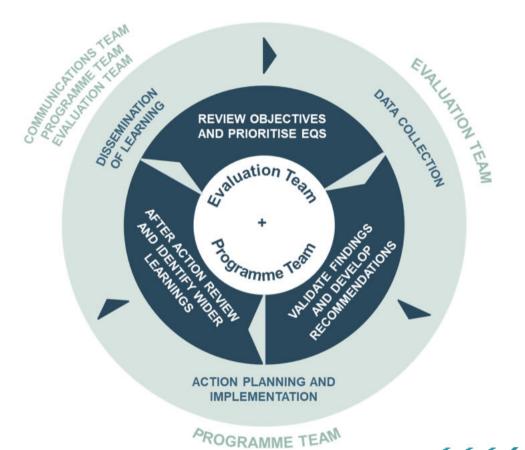
- The evaluation of the Energy Research Programme started in 2021 and is a five-year accompanying evaluation on behalf of the German Federal Ministry for Economic Affairs and Energy.
- The evaluation is theory-based combining a programme theory approach with multilevel perspective innovation system thinking and the concept of transformative outcomes.
- It uses a **mixed-methods approach** to develop ongoing analyses, reflections and recommendations as a basis for steering and continuous improvement of the programme ("programme learning"), while also contributing to an assessment of its effectiveness and impact of the programme.





THE EVALUATION'S LEARNING CYCLE





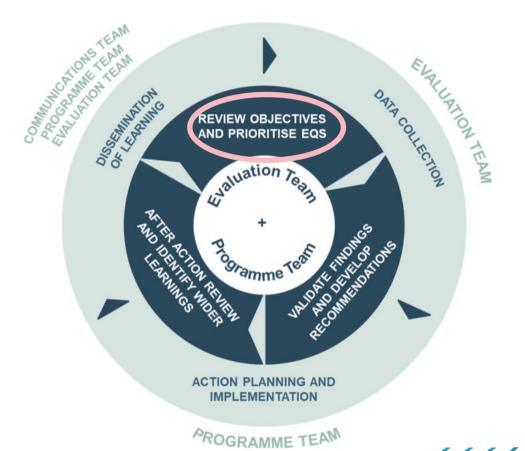


A cycle of events and activities were built into the evaluation process to maximise the opportunities for learning

3 fixed evaluation rounds: data collection and analysis incl. flexible in-depth topic investigations

Regular meetings with clients and expert workshops







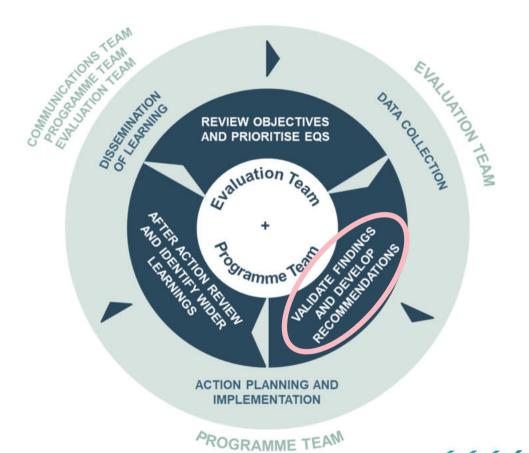
Review objectives and prioritise Evaluation Questions

Review for any changes in the target system and update

Identification of evaluation questions that are of particular interest

Choice of in-depth topics and agreed concept



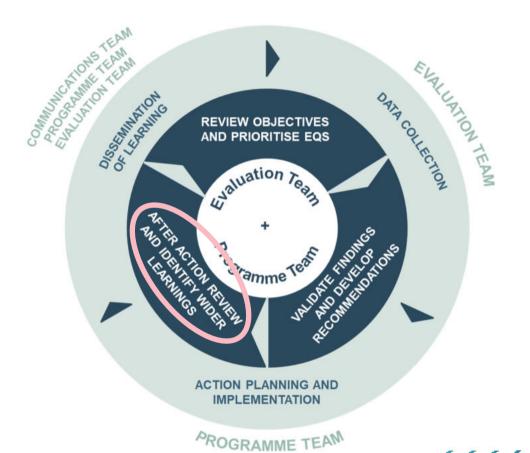




Validate Findings and Develop Recommendations

Joint reflection meeting with Ministry and Funding Agency

Co-development of recommendations (timetable, responsibilities)





After Action Review and Identify Wider Learnings

Feedback on the completed evaluation round Adaptation of the evaluation concept if necessary

Identification of key findings for dissemination







CONDUCTING THE EVALUATION





TIMELINE PROGRAMMES AND EVALUATION

2018 2019 2020 2021 2022 2023 2024 2025 2026

7th Energy Research Programme (2018-2023) 8th Energy Research Programme (2024+) Preparation for Transition **Evaluation** starts Final Report **Exploratory** 1st Round 2nd **Evaluability** 3rd Round Phase Round Assessment Finetuning of In-Depth Evaluation Delphi Evaluation Studies to Concept Approach Design Support to Goals / Missions 12

RESULTS: CHANGES TO THE LEARNING CYCLE



- Review of the objectives not longer necessary
- **Prioritizing evaluation questions**: helped to focus data collection and analyses for the evaluation rounds, additional in-depth studies for preparation
- Validating the results and deriving recommendations for action: presentations after rounds, but no clear action plans everything directed towards ERP 8
- Conclusion of the evaluation round: the planned reflection did not take place
- Identification of wider learnings: shared learnings on a wide range of conferences





CONCLUSIONS





CONCLUSIONS

- The learning cycle with the three learning occasions proved to be helpful, even if it
 could not be implemented consistently.
- The in-depth studies with short-term adjustment of the topics to the interests of the client in a specific situation were an important element for a **flexible response of the evaluation to changing external conditions**.
- Close and regular communication between the evaluation team and the client is useful for recognizing and responding to changing interests and needs in good time and helps to build trust.
- Evaluation in a challenging environment requires both consistency and flexibility within the evaluation team.
- Not all challenges can be foreseen the evaluation setting must also be able to react to them (e.g. optional services).

Recommendation: closely involve stakeholders, contain flexible elements to give adaptability and create room for reflection, sense-making and learning.



Further Reading

Dinges, M. et al. (2022): Theories of change for evaluating transformationoriented R&I programmes: the case of the 7th Energy Research Programme in Germany. Fteval Journal for Research and Technology Policy Evaluation, April. Vol. 53, pp. 57-68. DOI: 10.22163/fteval.2022.542

Dinges, M. et al. (2025): The Contribution of R&I programmes to Transition: Evidence on Transformative Outcomes in the areas of the Green Transition and the Energy Transition. Fteval Journal for Research and Technology Policy Evaluation, June, Vol. 57, pp. 175-192 DOI: 10.22163/fteval.2025.701





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BACKUP

Objectives of the 7th Energy Research Programme



OBJECTIVES OF THE 7TH ENERGY RESEARCH PROGRAMME





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Strengthen industrial location

Modernization, Preservation & Expansion of Competencies, Export opportunites 9

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Drive the energy transition forward

Develop holistic, innovative solutions & launch rapidly on the market

Energy supply: environment-friendly, secure, economical

Activate innovation dynamics



4

Comprehensive societal risk provision

Diversity of technology options

STRATEGIC OBJECTIVES

FEDERAL CLIMATE

CHANGE ACT 2021

Speed up the development of technological solutions, increase the performance of components and systems, accelerate the transfer of results, enhance economic efficiency, ensure international competitiveness, enable technical scalability, establish standards and enable interoperability, ensure system integration, ensure user perspective / acceptance / user-friendliness, facilitate cross-sectoral networking, increase safety and security of technologies, components, systems, increase energy & resource efficiency at process, life cycle & system level, activate relevant stakeholders, ensure exploitability in Germany

Specific Objectives of sectors, living labs, accompanying measures

OPERATIVE OBJECTIVES

SPECIFIC OBJECTIVES

Technology -neutral funding,
Expansion of project funding around system integration & cross-system topics,
Focus: technology and innovation transfer & innovation-friendly framework conditions
Strengthening of international / European Cooperation

PRINCIPLES

