

RECOMMENDER TOOL

SWEET EDGE work packages 1 - 3

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GOALS

- Increase share of locally available renewable energy sources
- Recommend solutions and consult municipalities for implementations
- Validate and demonstrate results in municipality showcases



METHODOLOGY

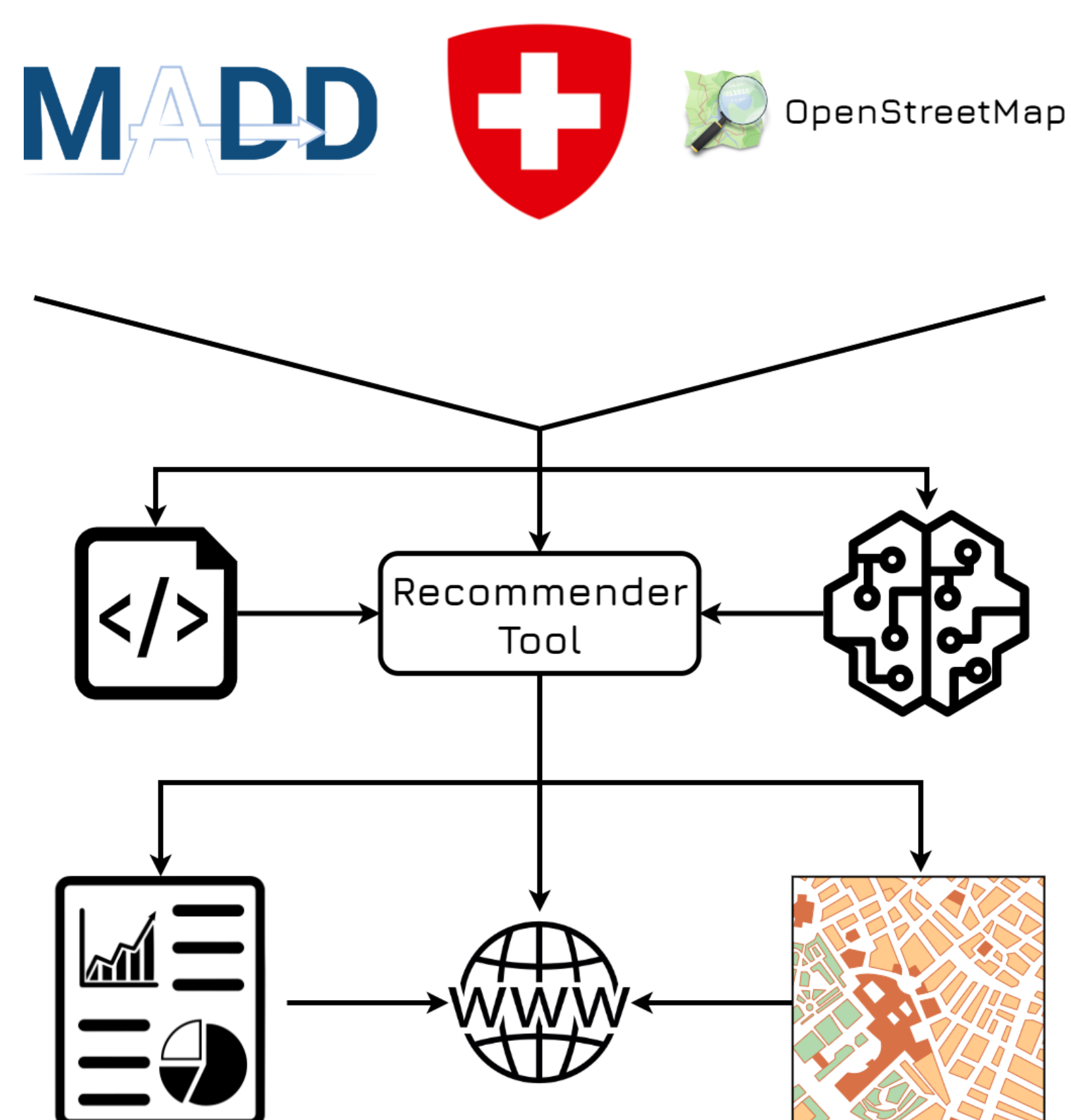
- Optimization of energy system designs through multi-integer linear programming (MILP) using Calliope
- Modelling of heating and cooling demands based on thermal energy balance equation and weather data
- Generation of scenarios based on available resources

VALIDATION

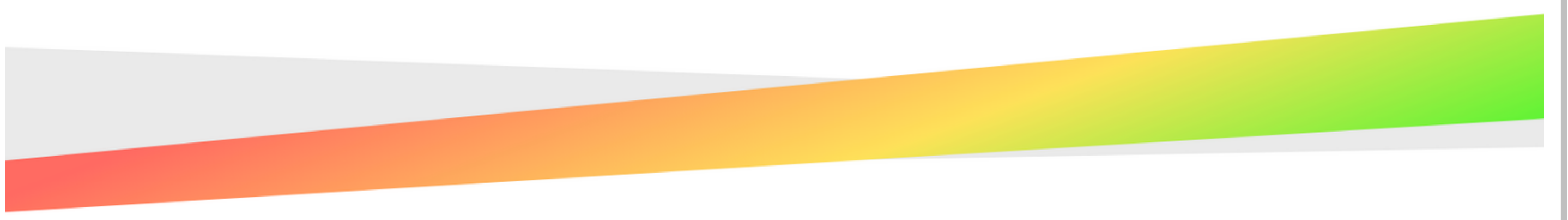
- Validation of simulation through pilot site measurements of a single-family house in the mountains
- Training of models with measured heat demands from selected municipalities and corresponding validations

DATA FLOW

- Use Public data
 - Federal register of buildings and dwellings
 - PV potentials
 - Installed PV
 - District heating networks
- Apply scripts & simulations
 - Consumer demands
 - MILP
- Create charts & maps



RESULTS



Willkommen auf der EDGE Recommender Seite

Das Recommender Tool der HSLU wurde im Rahmen von SWEET EDGE erstellt und bietet eine Gemeinde-Übersicht sowie Empfehlungen zu einer verbesserten Energieplanung.*

* Dieser Text ist nur ein Beispiel.

Wählen Sie Ihre Gemeinde

Zusammenfassung Basel

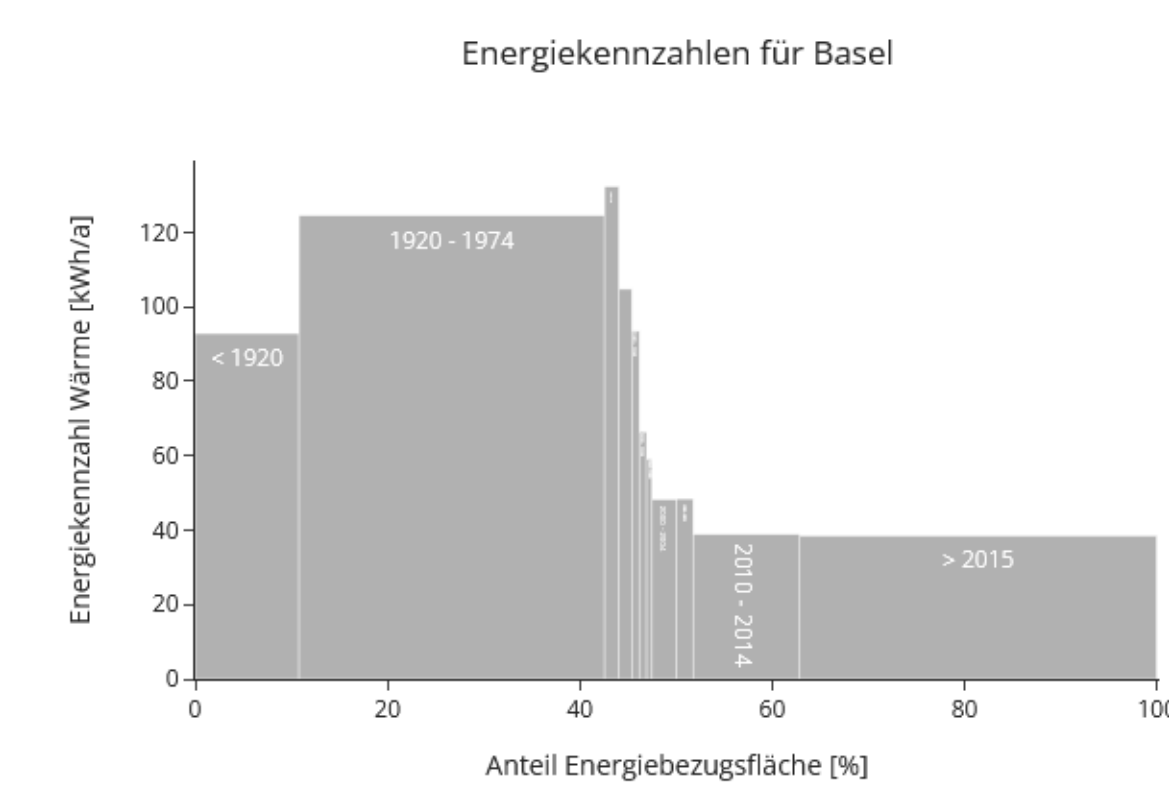
Hier erhalten Sie alle Informationen zur Gemeinde Basel.

Hier steht noch nichts

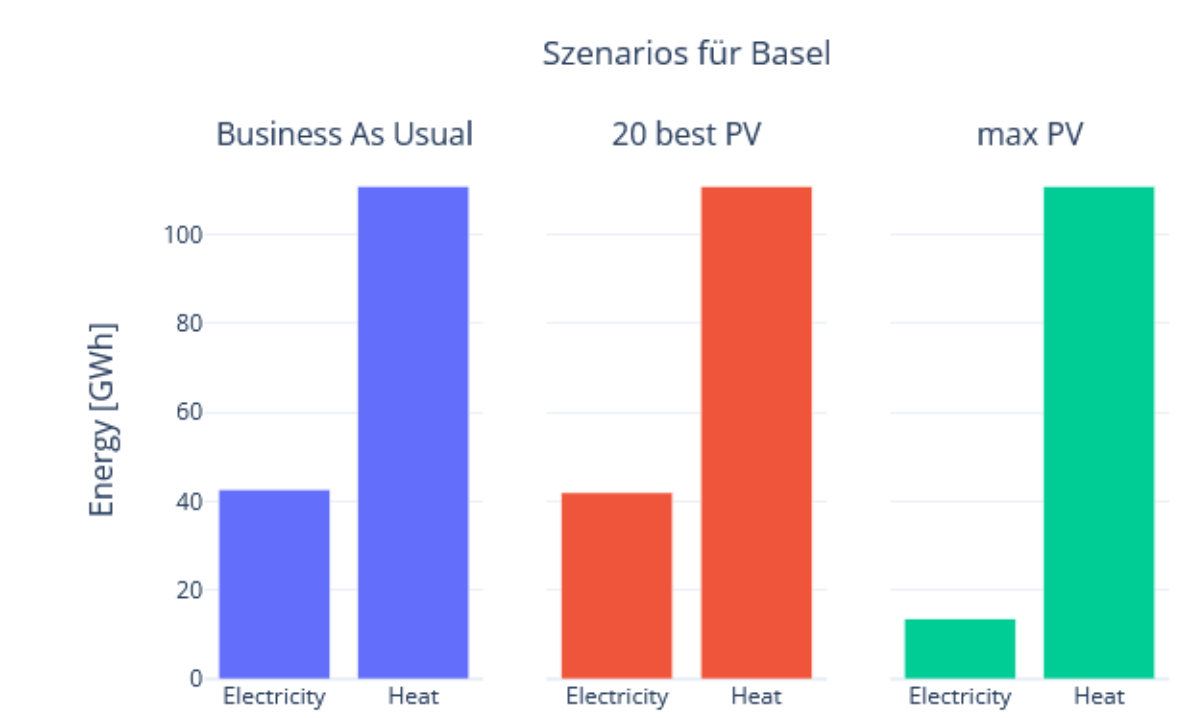
PV Potential: 19.28 % ausgeschöpft

Erneuerbare Heizsysteme: 47.70 % installiert

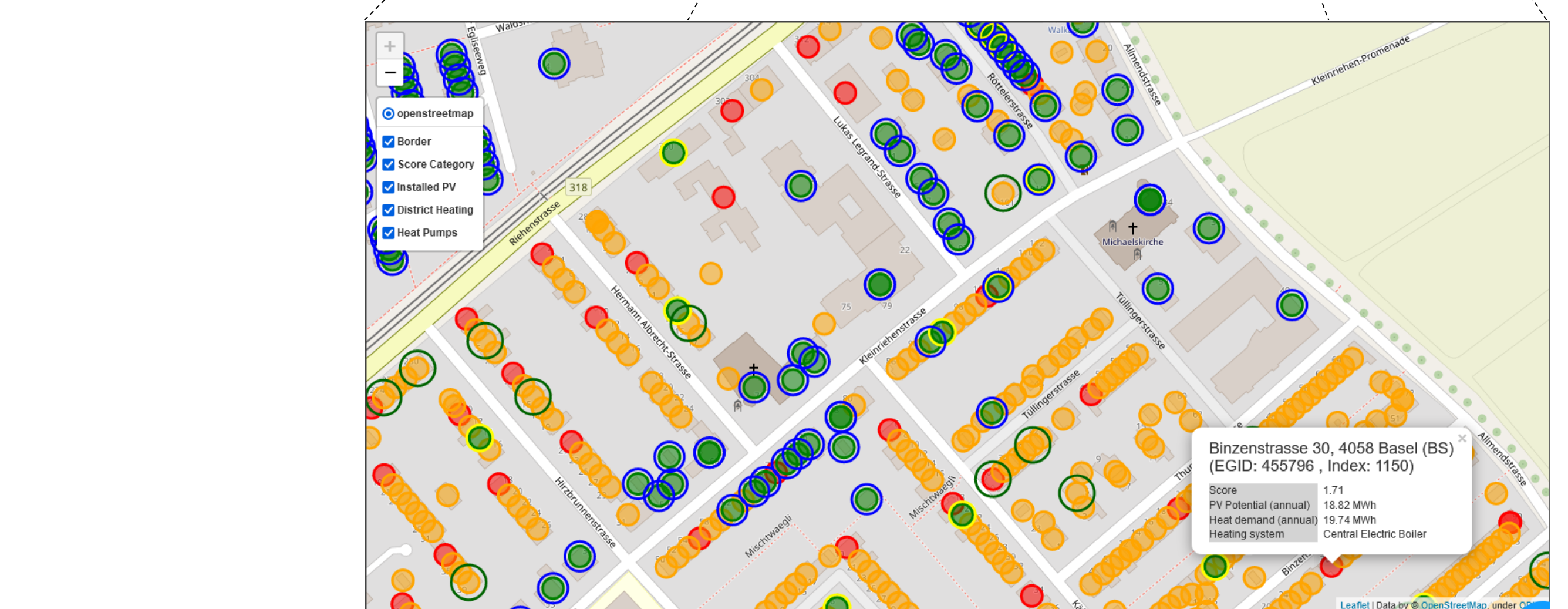
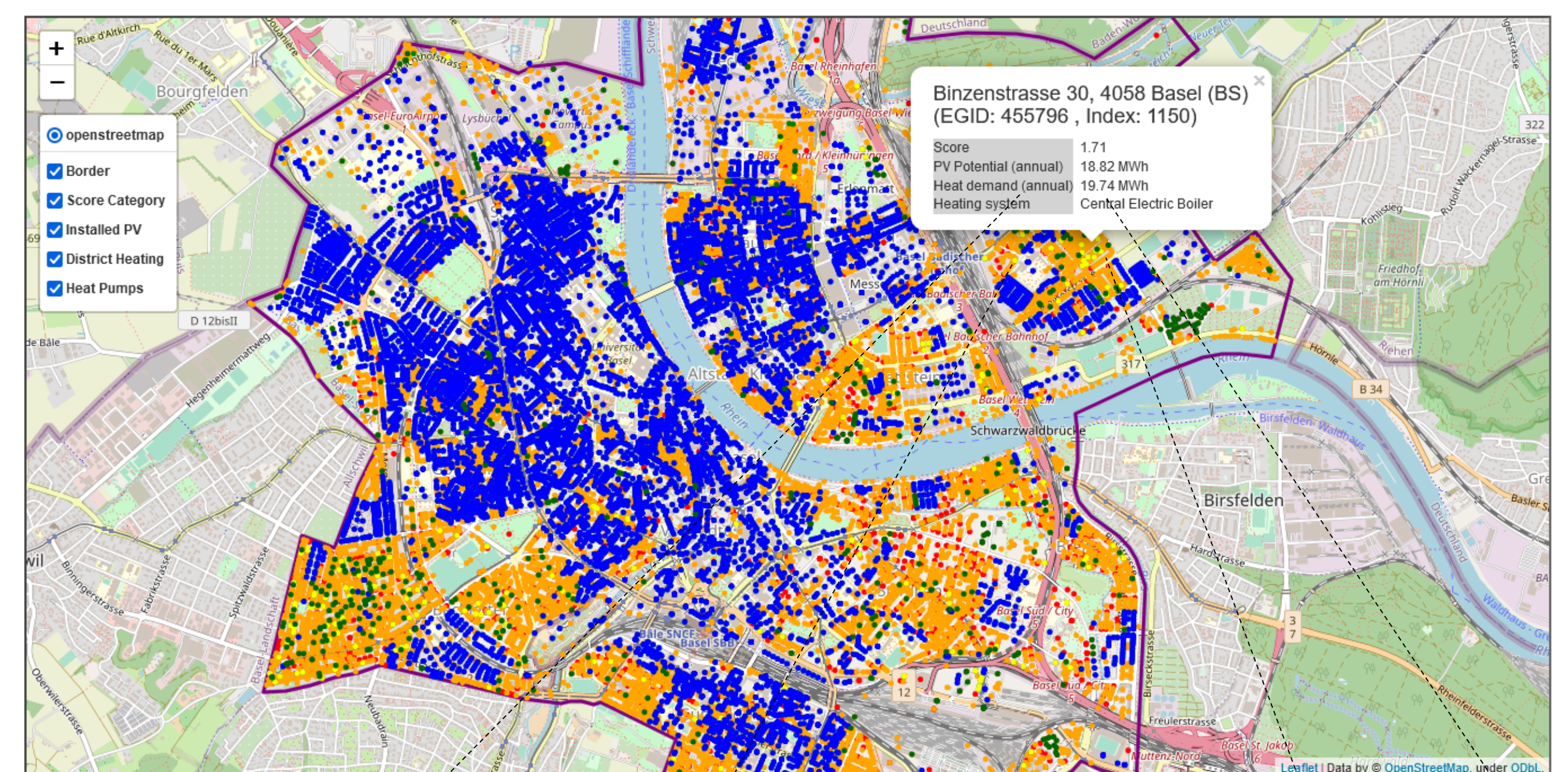
Energiekennzahlen nach Bauperiode



Szenarios im Vergleich



Kartenansicht



Disclaimer

- Results shown here are preliminary
- The data does not yet represent the fully available data

CONTACT

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REFERENCES

- Federal Register of Buildings and Dwellings, Federal Statistical Office, <https://public.madd.bfs.admin.ch>
- Geoportal of the federal administration, <https://data.geo.admin.ch>
- Calliope: Pfenninger et al., (2018). *Calliope: a multi-scale energy systems modelling framework*. Journal of Open Source Software, 3(29), 825, <https://doi.org/10.21105/joss.00825>

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