AMIRIS – The Open Agent-based Market Model
How to get involved and profit from our model

AMIRIS Model
The open Agent-based Market model for the Investigation of Renewable and Integrated energy Systems

- **Type:** Agent-based model for power markets
- **Logic:** Trading and operation of power generation plants and flexibility options
- **Strength:** Model business-oriented behaviour under uncertainty and different regulatory framework conditions
- **Temporal resolution:** ≤ hourly
- **Spatial resolution:** Market zone(s) and market coupling
- **Results:** Electricity prices, full load hours, market values, costs for support instruments, etc.
- **Availability:** Development since 2008; OS since 2021 at https://gitlab.com/dlr-ve/esy/amiris

AMIRIS Examples
Open configuration files to test AMIRIS and provide a starting point for your analyses

- **Aim:** Provide example configurations for AMIRIS
- **Germany2019:** Scenario of DE day-ahead market in 2019
- **Austria2019:** Scenario of AT day-ahead market in 2019
- **Simple:** Minimal working example with dummy data
- **License:** Fully open access
- **Availability:** https://gitlab.com/dlr-ve/esy/amiris/examples

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Get started!
1. Get our Python wrapper AMIRIS-Py via pip install amirispy
2. Ensure you have Java installed
3. Install AMIRIS (and its examples) via amiris install
4. Run your first model via amiris run -f scenario.yaml
5. Look at your results and start your experiments using AMIRIS

Get further information: https://pypi.org/project/amirispy

Get involved!
- **Use AMIRIS**
  - Ask us at opened with tag amiris
  - Report difficulties
  - Create / publish scenarios
  - Cite AMIRIS
- **Make us enhance AMIRIS**
  - Post ideas using tag amiris
  - Report issues / bugs at Gitlab
  - Make pull requests
- **Enhance AMIRIS yourself**
  - Improve / modify agents
  - Sign Contributor License Agreement
  - Make pull requests

Research and Projects
- **TradeRES:** Market designs for a ~100% RES-E System
- **ERAFlex II:** Realisable Energy System Optimum
- **VERMEER:** Market coupling in extreme weather events
- **En4U:** Aggregation of household decisions
- **FEAT:** Robust machine learning decisions under uncertainty

Important Links
- **Website** https://pypi.org/project/amirispy
- **Gitlab** https://gitlab.com/dlr-ve/esy/amiris
- **Forum** https://forum.openmod.org/tag/amiris
- **Wiki** https://gitlab.com/dlr-ve/esy/amiris/wiki
- **Zenodo** https://zenodo.org/communities/amiris
- **E-Mail** AMIRIS@dlr.de
- **FAME Framework** https://gitlab.com/fame-framework

Fig.1: AMIRIS Model Structure

Fig.2: Price duration curves Germany 2019 (top) & Austria 2019 (bottom)