SEAI EE modelling framework Ireland

CONCERTED ACTION
ENERGY EFFICIENCY
DIRECTIVE

National Energy Modelling Framework

Scope and aims of the project
- Look at the future of energy supply and demand in Ireland
- Analyse the impact of policies and measures on overall trends
- Consider gaps to targets
- Inform policy development in priority areas
- National and international reporting commitments / requirements

A range of stakeholders are involved – national energy ministry and SEAI (agency) plus Post-Doc researchers and Ireland's Economic and Social Research Institute (ESRI)

Outputs are targeted at policy makers and for general public interest on progress to targets etc.

The work is coordinated and delivered by the Sustainable Energy Authority of Ireland (SEAI) and is funded via the energy ministry (Dept. for Communications and Climate Action)

Critical success factors

Involving a wide range of stakeholders is critical to agree input assumptions and garner support and acceptance of the outputs.

Collaborative working arrangements and stakeholder consultation lead to an insightful project.

Lots of work is done to ensure the tools used are robust - credibility of results is key.

Innovation

Modelling includes consumer decision making and choice modelling. This goes beyond traditional technical and economic potential and includes anticipated uptake of policies and measures based on a consumer decision making framework. This framework is incorporated in the models.

Outcomes

Key achievements

SEAI produces the National Energy Projections annually. These inform National Emissions Projections produced by the Environmental Protection Agency (EPA) Ireland.

The projections will inform Ireland's NECP.

Lesson learned

It takes time and significant human resources to develop an energy modelling system that is fit for purpose and robust.

Ensuring stakeholders are aligned / aware of the input assumptions is important for acceptance of outputs

Design models a lot before implementing

Changes you would make in the future

The modelling framework was developed as a result of years of work developing individual models and eventually linking them. Designing a model from scratch and building it using the appropriate software form the beginning may have been more efficient. However, given the nature of modelling and reporting requirements this was not the case. We will now move the system to new software - trickier than if done form the start!

Replicating your approach

Involve lots of stakeholders and consult widely

Recruit the right expertise

Spend lots of time designing a modelling framework before starting to build it

Ensure the outputs will be insightful and useful to stakeholders before you start

Discuss approach with international experts – lots has been done before

Further information

Final comments

Principles of model development

- Combining existing models – consistent assumptions

- Robust and quality models (verified) - acceptability of results by key decision makers and Commission

- Leverage what we know about policy delivery – incorporating what works

- Ongoing – improvements and refinement of EE policy and measure estimates

Outcomes

- Fulfil required input to NECP, advising DCCAE, informing decision makers in a single plan encompassing climate and energy

- Baseline (existing situation) – and policy effort scenario/s

- Modelling framework that is flexible and responsive to key policy questions / propositions / trade-offs

Ongoing development of the modelling framework is underway.

Further information

Latest SEAI publication

https://www.seai.ie/resources/publications/Irelands_Energy_Projections.pdf

Relevant SEAI outputs

https://www.seai.ie/about/policies/

National Emissions Projections

http://www.epa.ie/climate/emissionsinventoriesandprojections/nationalemissionsprojections/

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