

Myopic windows: Temporal trade-offs in decarbonisation pathways

Dr. Francis Li | Francis.Li@ucl.ac.uk

UCL Energy Institute | www.ucl.ac.uk/energy

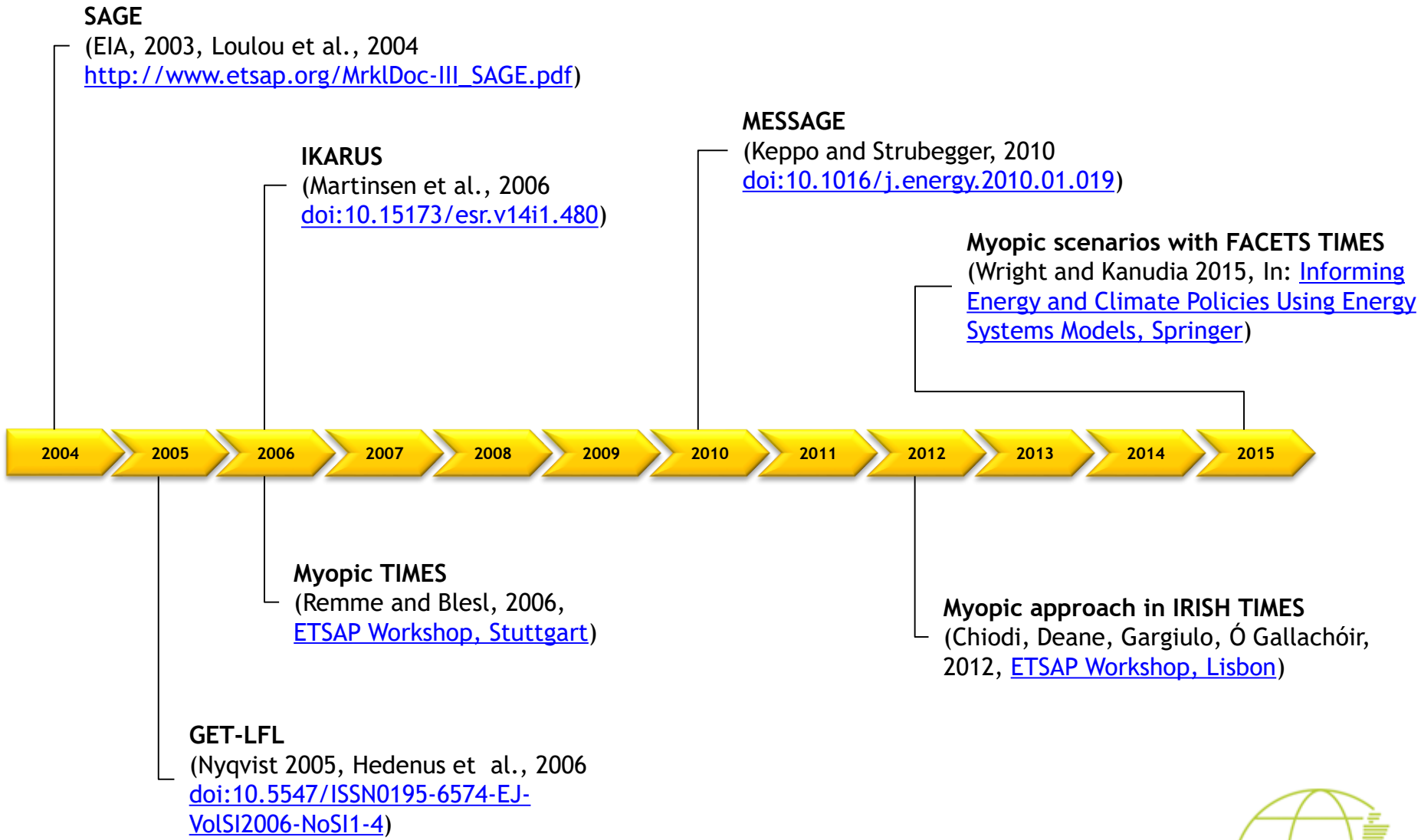


Decision-Timing Uncertainty

- Timing of decisions is a key uncertainty in energy policy
- TIMES model environment has an abstract representation of decision making:
 - One set of information, one set of decisions vs.
 - Multiple sequential decisions, new information received constantly
- Perfect foresight model formulations difficult for exploring
 - Interim target setting (e.g. 2030, then 2050)
 - Lock-in and path dependencies (high capital costs, long lifetimes)
 - Sudden changes to policy environment (e.g. price shocks)
- Options for exploring timing uncertainty
 - Multiple scenarios
 - Stochastic modelling with branching points
 - Myopic model formulation

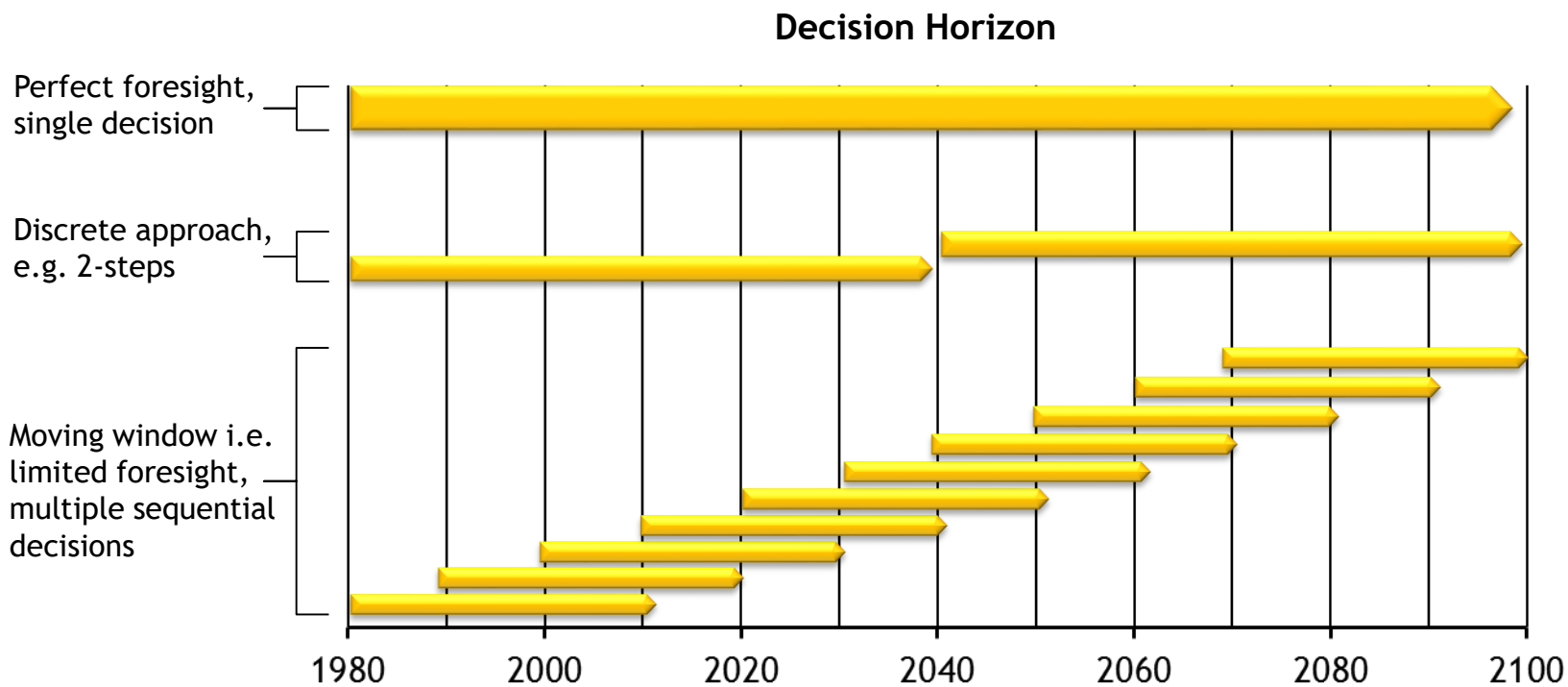


Myopic Energy Systems Optimization Modelling: Last ~ 10 years



Approaches to Myopic Foresight

Keppo, I., Strubegger, M., 2010. *Short term decisions for long term problems - The effect of foresight on model based energy systems analysis*. Energy 35, 2033-2042. [doi:10.1016/j.energy.2010.01.019](https://doi.org/10.1016/j.energy.2010.01.019)



Proposal

- **Workshop:** Spring 2016, Central London (2 days)
 - All teams present and compare a (small) set of broadly consistent scenarios using the myopic version (with alternate windows of myopic foresight)
 - Cover various regional, national and international TIMES and other ESOM models
 - Focus is on understanding how the myopic feature works and how the insights drawn are useful for informing policy
- **Output:** Review paper for journal submission Fall 2016 i.e. *“State-of-art progress in considering myopic trade-offs in long-term energy pathways”*
- **Annex XII Relevance:** Research and Development, Capacity Building



Proposal

- Joint funding: ETSAP (€10k) and UK Whole Systems Energy Modelling Consortium (€12k)



- Expressions of interest received from 14 groups:



Questions?

