

# Using Scenarios to Inform Policy Decisions IEA ETSAP Experience

**Prof. Brian Ó Gallachóir**

Chair IEA ETSAP TCP Executive Committee  
Director SFI MaREI Centre

> 100 publications per annum (including 50 peer-review journal papers) from:

- i) **Global Models:** incl. IEA ETP model, original TIMES Integrated Assessment Model (TIAM), derived TIAM models, ETSAP-TIAM model
- ii) **Regional Models:** Pan-European TIMES model, MARKAL-TIMES Models for Europe, Asia and North America.

*Multi-regional models*

iii) **National Models** of 32 countries (including China).

iv) **Sub-National Models:** Western China, Reunion Island (France), Lombardy (Italy), Pavia (Italy), and Kathmandu Valley (Nepal).

v) **Local Models** for rural areas and cities in Austria, Germany and Italy, other bigger cities such as Madrid (Spain), Beijing, Guangdong and Shanghai (China), Johannesburg (South Africa) and New York City (United States).

[https://iea-etsap.org/finreport/ETSAP\\_Annex-XIII\\_Report.pdf](https://iea-etsap.org/finreport/ETSAP_Annex-XIII_Report.pdf)

- methodologies and case studies
- demonstrating use of energy systems models
- supporting energy and climate policy

>22,000 Chapter downloads - one of the **top 25% most downloaded eBooks** in the relevant SpringerLink eBook Collection in 2016

[www.springer.com/gp/book/9783319165394](http://www.springer.com/gp/book/9783319165394)

Lecture Notes in Energy 30

George Giannakidis  
Maryse Labriet  
Brian Ó Gallachóir  
GianCarlo Tosato *Editors*

## Informing Energy and Climate Policies Using Energy Systems Models

Insights from Scenario Analysis  
Increasing the Evidence Base

 Springer



***2014 National Action Plan on Climate  
Action***

***2014 Negotiation with EU on 2030 Targets***



***2003 Energy White Paper***

***2007 Energy White Paper***

***2008 Climate Change Act***



***2015 Climate Action & Low  
Carbon Development Act***

***2014 Negotiation with EU  
on 2030 Targets***



***2006 St. Petersburg G8***

***2011 US DoE Critical Materials Strategy***

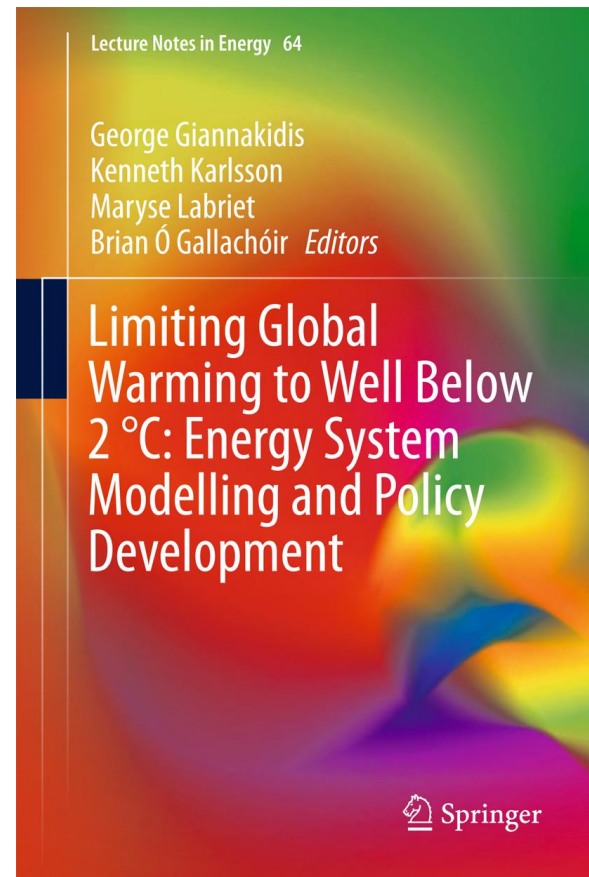
***2012 UK DoE Innovation Strategy***

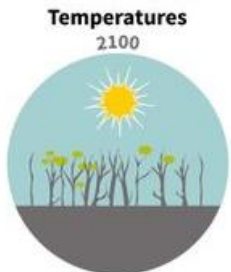




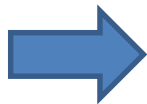
- explores feasibility of a well-below-2°C world
- energy system pathways and technology innovations
- behaviour change and the macro-economic impacts
- chapters directly related to the NDCs

[www.springer.com/gp/book/9783319744230](http://www.springer.com/gp/book/9783319744230)





• Keep warming “well below 2 degrees Celsius”. Continue all efforts to limit the rise in temperatures to 1.5 degrees Celsius”









CLIMATE POLICY  
2019, VOL. 19, NO. 1, 30–42  
<https://doi.org/10.1080/14693062.2018.1464893>



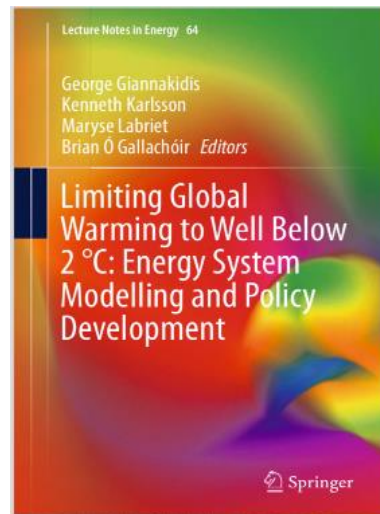
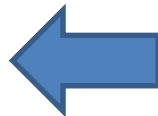
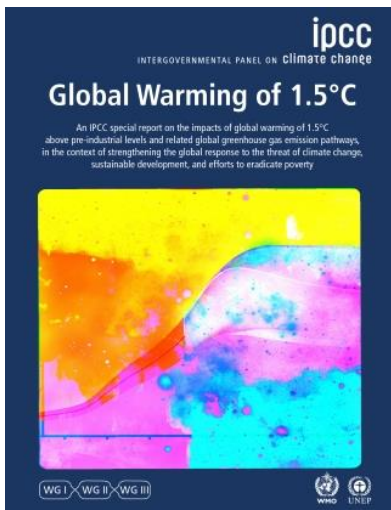
RESEARCH ARTICLE

 OPEN ACCESS  Check for updates

## Zero carbon energy system pathways for Ireland consistent with the Paris Agreement

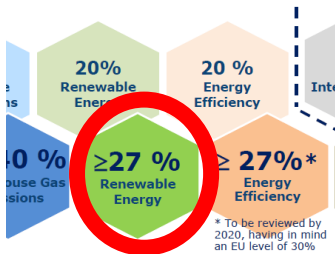
James Glynn <sup>a,b</sup>, Maurizio Gargiulo <sup>a,b,c</sup>, Alessandro Chiodi <sup>a,b,c</sup>, Paul Deane <sup>a,b</sup>, Fionn Rogan <sup>a,b</sup> and Brian Ó Gallachóir <sup>a,b</sup>

<sup>a</sup>MaREI Centre, Environmental Research Institute, University College Cork, Cork, Ireland; <sup>b</sup>School of Engineering, University College Cork, Cork, Ireland; <sup>c</sup>E4SMA S.r.l., Turin, Italy





## Agreed headline targets 2030 Framework for Climate and Energy



New governance system + indicative



Energy Strategy Reviews 22 (2018) 147–165

Contents lists available at ScienceDirect

Energy Strategy Reviews

journal homepage: [www.elsevier.com/locate/esr](http://www.elsevier.com/locate/esr)

ELSEVIER

Check for updates

Planning the European power sector transformation: The REmap modelling framework and its insights

Seán Collins<sup>a,b,\*</sup>, Deger Saygin<sup>c,1</sup>, J.P. Deane<sup>a,b</sup>, Asami Miketa<sup>c</sup>, Laura Gutierrez<sup>c</sup>, Brian Ó Gallachóir<sup>a,b</sup>, Dolf Gielen<sup>c</sup>

<sup>a</sup> Energy Policy and Modelling Group, MaREI Centre, Environmental Research Institute, University College Cork, Ireland  
<sup>b</sup> School of Engineering, University College Cork, Ireland  
<sup>c</sup> International Renewable Energy Agency, IIREC, Bonn, Germany

News  
European Parliament

Headlines Press room Agenda FAQ

Press room / Energy: new target of 32% from renewables by 2030 agreed by MEPs and ministers

Energy: new target of **32%** from renewables by 2030 agreed by MEPs and ministers

Press Releases ENVI ITRF 14-06-2018 - 13:38



## Renewable Energy Prospects for the European Union








# Informing EU Decarbonisation



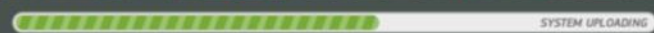
# DEEDS

DIALOGUE ON EUROPEAN  
DECARBONISATION STRATEGIES



# FINAL REPORT

of the High-Level Panel  
of the European Decarbonisation  
Pathways Initiative



Research and  
innovation



More information  
available from

[www.iea-etsap.org](http://www.iea-etsap.org).

## ExCo Chair:

Prof. Brian Ó Gallachóir

[b.ogallachoir@ucc.ie](mailto:b.ogallachoir@ucc.ie)

## Operating Agent:

Dr. Kenneth Karlsson

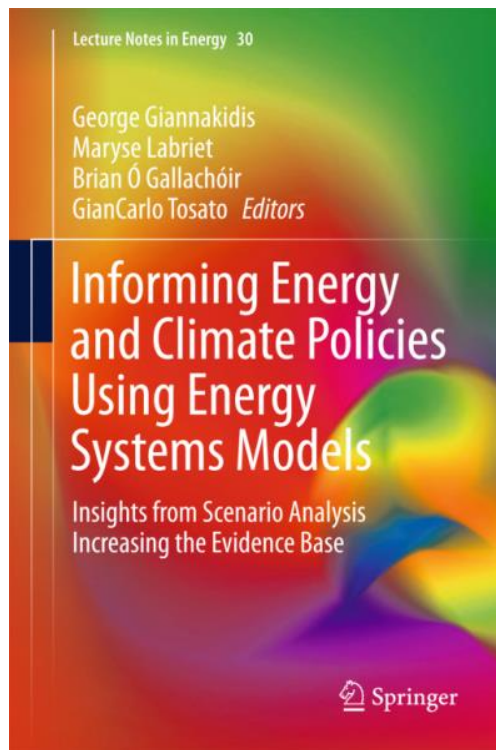
[keka@dtu.dk](mailto:keka@dtu.dk)

## Project Head:

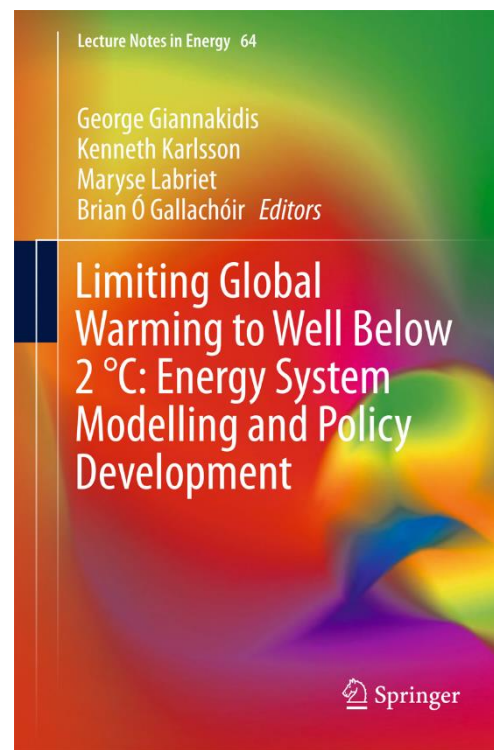
Dr. George Giannakidis

[ggian@etsap.org](mailto:ggian@etsap.org)

## Books on the use of ETSAP tools for Policy formulation



Available at:  
[www.springer.com/gp/book/9783319165394](http://www.springer.com/gp/book/9783319165394)



Available at:  
<https://www.springer.com/gp/book/9783319744230>