Evidence to Oireachtas Joint Committee on Communications, Climate Action and Environment, detailed scrutiny of Climate Emergency Measures Bill

Climate Limits and Fossil Fuel Production

Greg Muttitt, 10 July 2018
Summary of evidence

• Ireland is not on course for achieving its climate goals.
• Both globally and in Ireland, there is too much fossil fuel.
• Natural gas is part of the problem, not the solution:
  o It does not fit in decarbonisation pathways.
  o It holds back renewables and locks in emissions;
• It is both necessary and possible to end new licensing of oil and gas.
• Policy to restrict supply is an emerging trend in climate leadership.
IRELAND NOT ON COURSE FOR ACHIEVING CLIMATE GOALS

“Ireland is not projected to meet 2020 emissions reduction targets and is not on the right trajectory to meet longer term EU and national emission reduction commitments”

Environmental Protection Agency, May 2018
The world is not on course for achieving the Paris goals

Global GHG emissions projections, compared to Paris goals scenarios. Source: UN Environment Programme
Ireland cannot achieve climate goals unless it reduces oil and gas use

Projected fossil CO2 emissions (“With additional measures”), compared to target of 80-95% cuts from 1990 levels by 2050. Sources: Sustainable Energy Authority of Ireland; IPCC emissions factors
WE HAVE TOO MUCH FOSSIL FUEL

“Every investment we make today has an emissions lock-in. The quality of investment today equals the quality of energy tomorrow and our quality of life forever”

Christiana Figueres, former executive secretary of UNFCCC
Carbon budgets as of 1 January 2018. Source: IPCC Fifth Assessment Report
Developed reserves already exceed carbon budgets

Committed emissions from already-operating fields and mines. Sources: Oil Change International analysis; data from Rystad Energy, IEA, IPCC
What are developed reserves?
New oil and gas development threatens environment and economy
Markets are shaped by supply as well as demand

“We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility [demand] or cost of production [supply].”

GAS IS PART OF THE PROBLEM, NOT THE SOLUTION

“Even if we decommissioned all the world’s coal plants by 2035, the power sector would still be tracking above a climate-safe trajectory, burning too much unabated gas. Getting to two degrees requires a zero-carbon solution”

Matthias Kimmel, Bloomberg New Energy Finance, June 2018
The power sector must decarbonise by 2050

CO₂ emissions from power generation, by temperature scenario. Source: IPCC Fifth Assessment Report
Gas is not a transition fuel

Global power sector emissions (showing effect of all 2040 coal displaced by gas) vs median IPCC 2040 emissions for 2°C. Sources: IEA, IPCC, Oil Change International analysis
Gas is holding back renewables

Mean unsubsidised levelized cost of energy; primarily relates North America but reflects global cost declines. Source: Lazard
New gas locks in emissions

New gas locks in emissions

New gas locks in emissions

Cairn Energy’s Spanish Point discovery: projected economics. Source: Rystad Energy
IT IS POSSIBLE AND NECESSARY TO END NEW LICENSING

“The time for excuses is over.”

Frank Bainimarama, Prime Minister of Fiji, September 2015
IEA scenarios are not aligned with Paris goals

Global energy emissions, Sustainable Development Scenario. Sources: IEA, Oil Change
International analysis
Rapid emissions cuts needed

Depleting Paris-goal carbon budgets mathematically by constant decline rates with no negative emissions. Sources: IPCC; Rockström et al; Oil Change International analysis
It is possible

• Northeast Germany grid operator: can handle up to 70-80% wind and solar, even without additional flexibility options such as storage.

• South Australia grid operator: 100% renewable energy is affordable and practical using a combination of existing technology for storage, demand management and efficiency.

• Global survey of 1,600 energy professionals by DNV GL found nearly half of respondents believed their electricity system could achieve 70% renewable generation by 2030, with sufficient political will.

• Electric cars are close to cost-competitive with oil-fuelled cars (total costs of operation), and will soon be cheaper on sales price alone.
THE NEW CLIMATE LEADERSHIP

"Unless we make decisions today (that will essentially take effect in 30 or more years' time), we run the risk of acting too late and causing abrupt shocks to communities and our country… I am proud of this Government for facing up to the inevitable and for planning for it. We owe that to future generations."

Jacinda Ardern, New Zealand Prime Minister, April 2018
Declaration on Climate Finance

We are economists from around the globe calling on world leaders to take immediate action to end investments in new fossil fuel production and infrastructure and encourage a dramatic increase in investments in renewable energy.
To align our support to countries seeking to meet their Paris Agreement goals, we announced today that we will no longer finance upstream oil and gas after 2019.
Gov. Brown urged to phase out state's fossil-fuel industry

Survey: Majority choose climate before oil

FINANCIAL TIMES
Oil must face its future as a declining industry

China moves towards banning the internal combustion engine
Its government is developing a plan to phase out vehicles powered by fossil fuels

Scientists Call for Halt to Canada's Oil Sands Growth
Expansion of oil production from tar sands is incompatible with halting climate change

Colombia Has Oil, but Voters Want to Keep It Underground
Conclusions

• An excess of fossil fuels is the major barrier to achieving climate goals.
• Ending new licensing of oil and gas is necessary for the achievement of the Paris goals.
• Claims that gas is a “transition fuel,” that natural decline of oil and gas production is too fast, and that renewables cannot do the job, are incorrect.
• By passing the Climate Emergency Measures Bill, Ireland could secure its reputation for climate leadership.