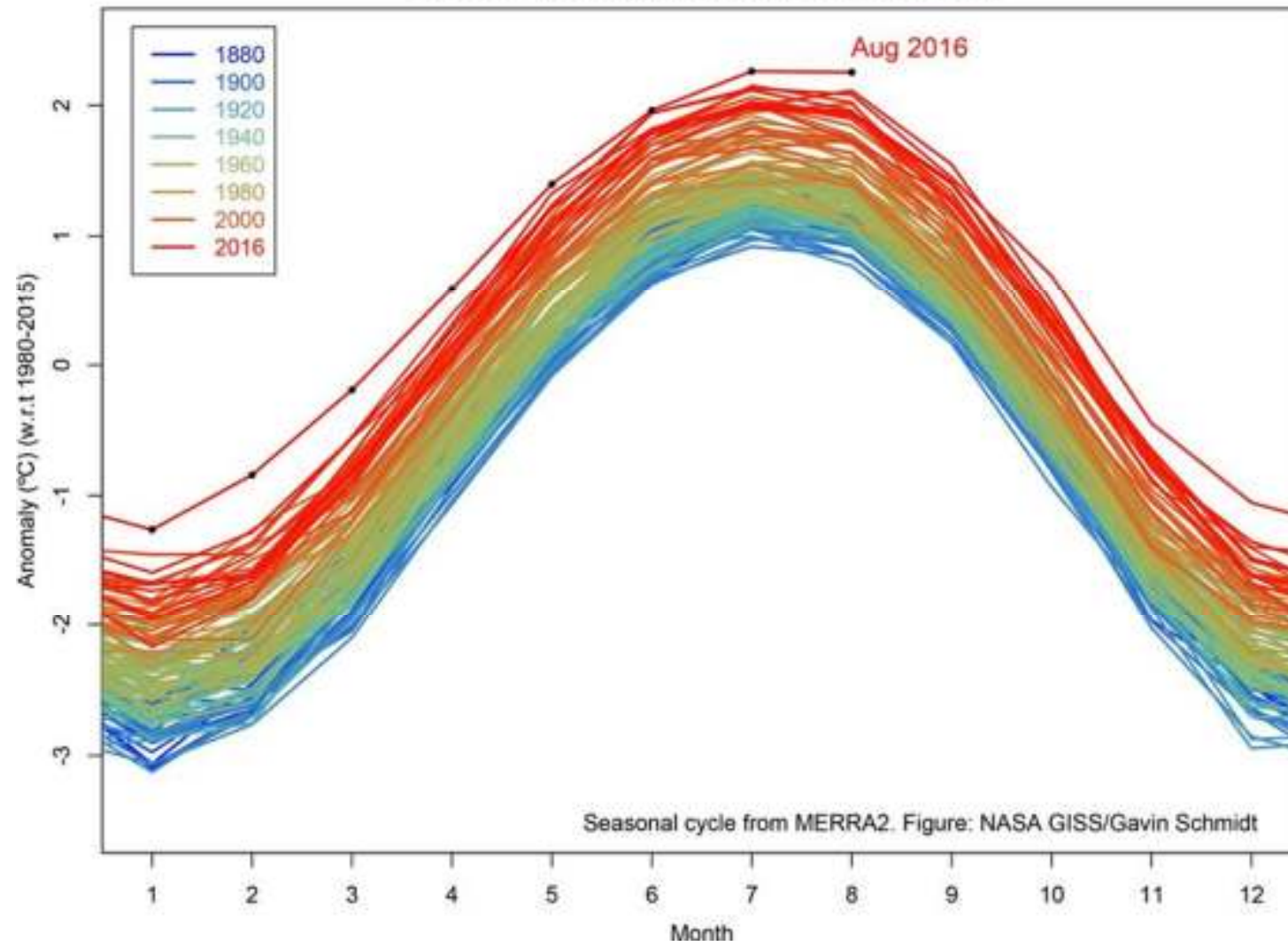


La transition énergétique, l'affaire de tous

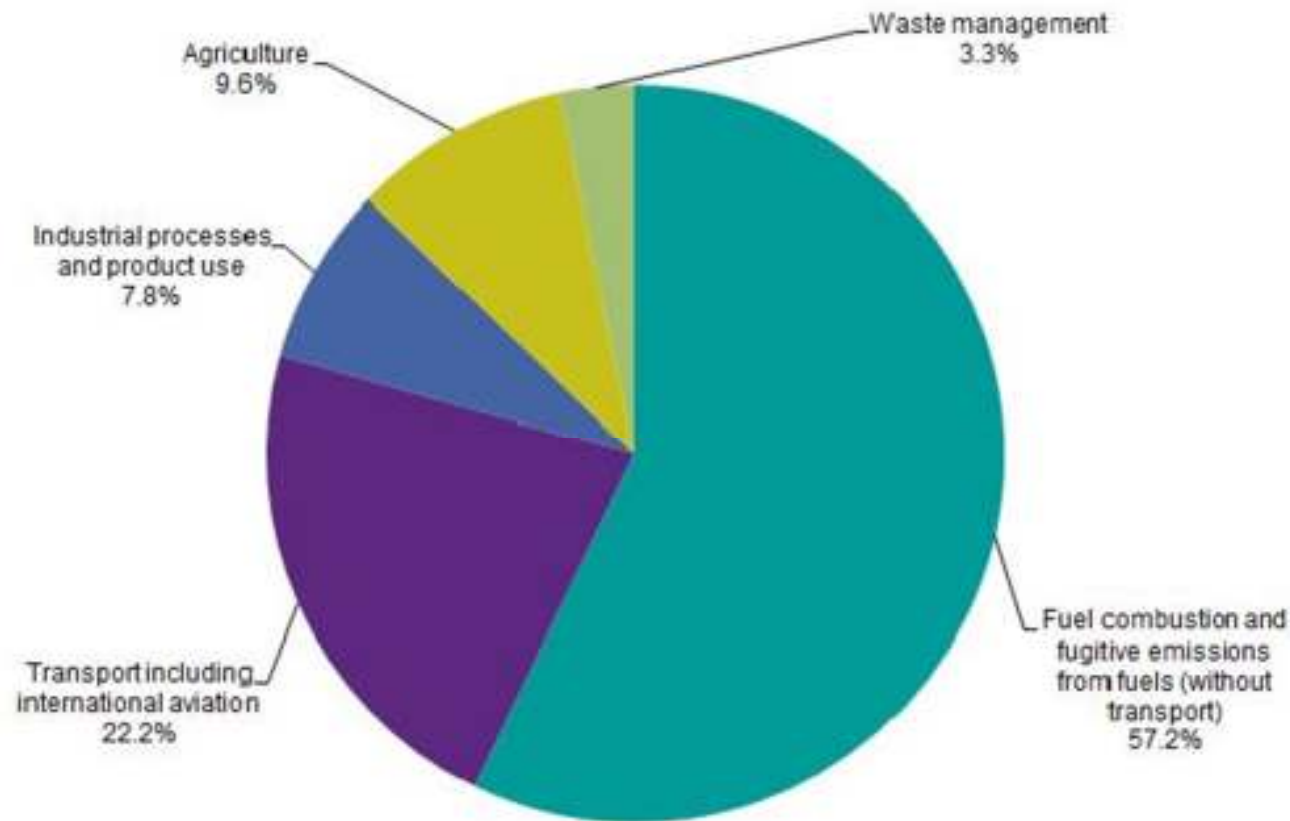
Prof. Damien ERNST



GISTEMP Anomaly (including seasonal cycle)



Greenhouse gas emissions, by source sector, EU-28, 2013 (% of total):

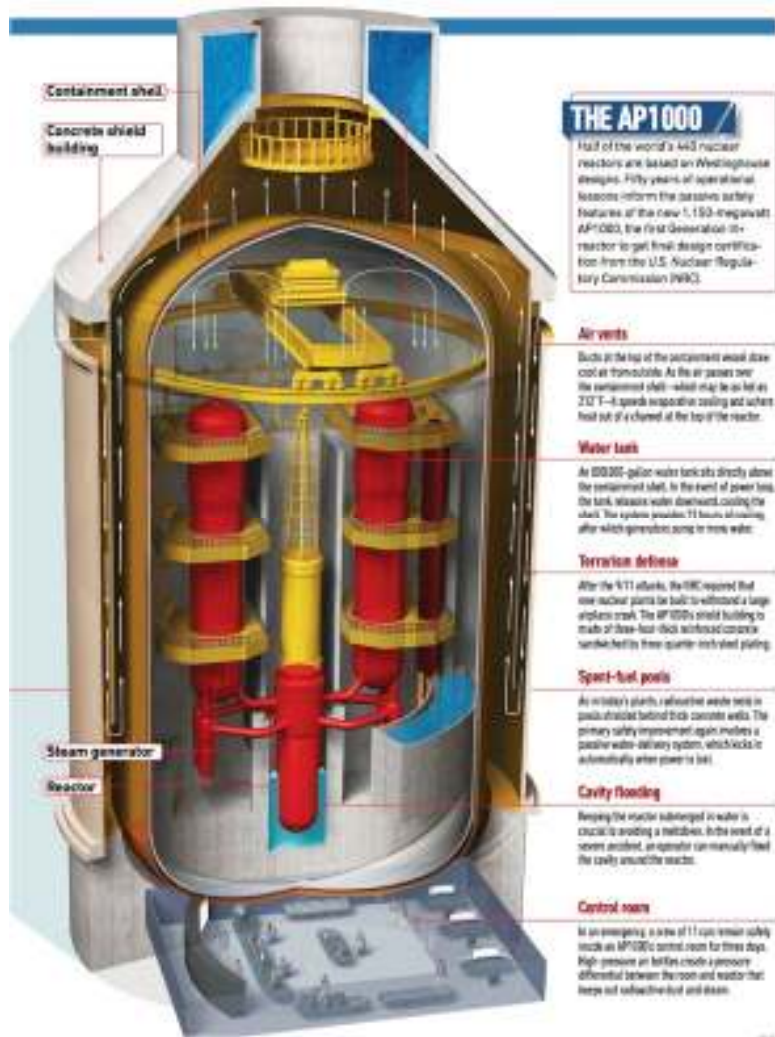


COP21: Ambitious cuts in greenhouse gas emissions => Necessarily implies (virtually) stopping burning fossil fuels.

Average daily energy consumption per person: 125 kwh

Electrical consumption in Belgium: 80 TWh

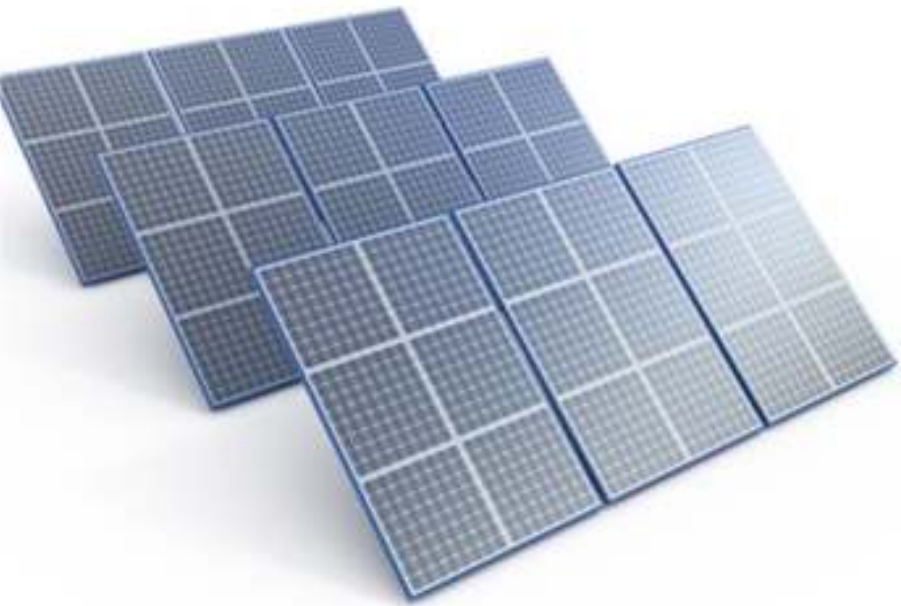
Energy consumption in Belgium: 600 TWh



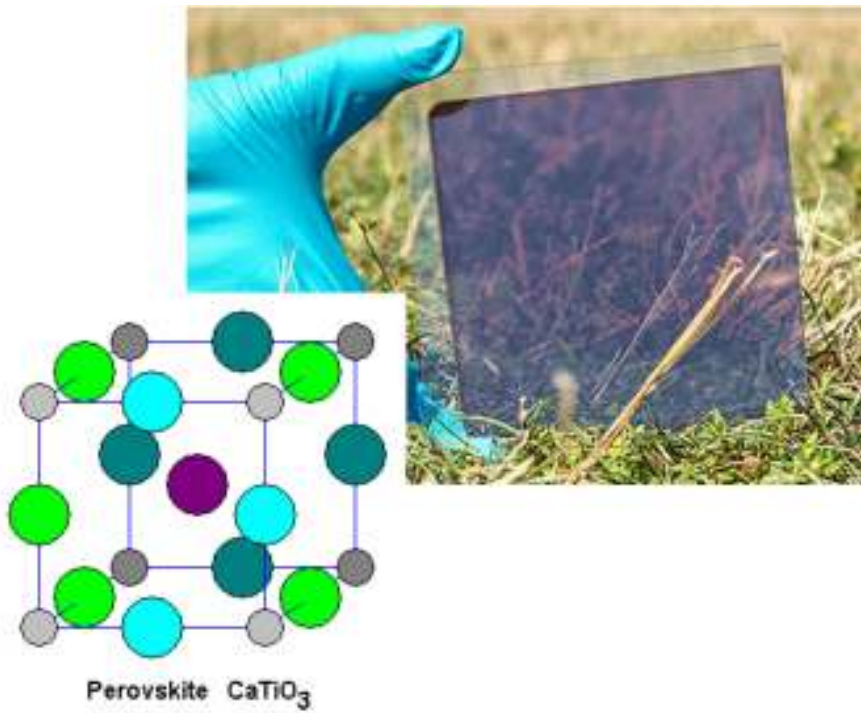
69 AP1000 nuclear reactors



30220 Enercon-126 wind

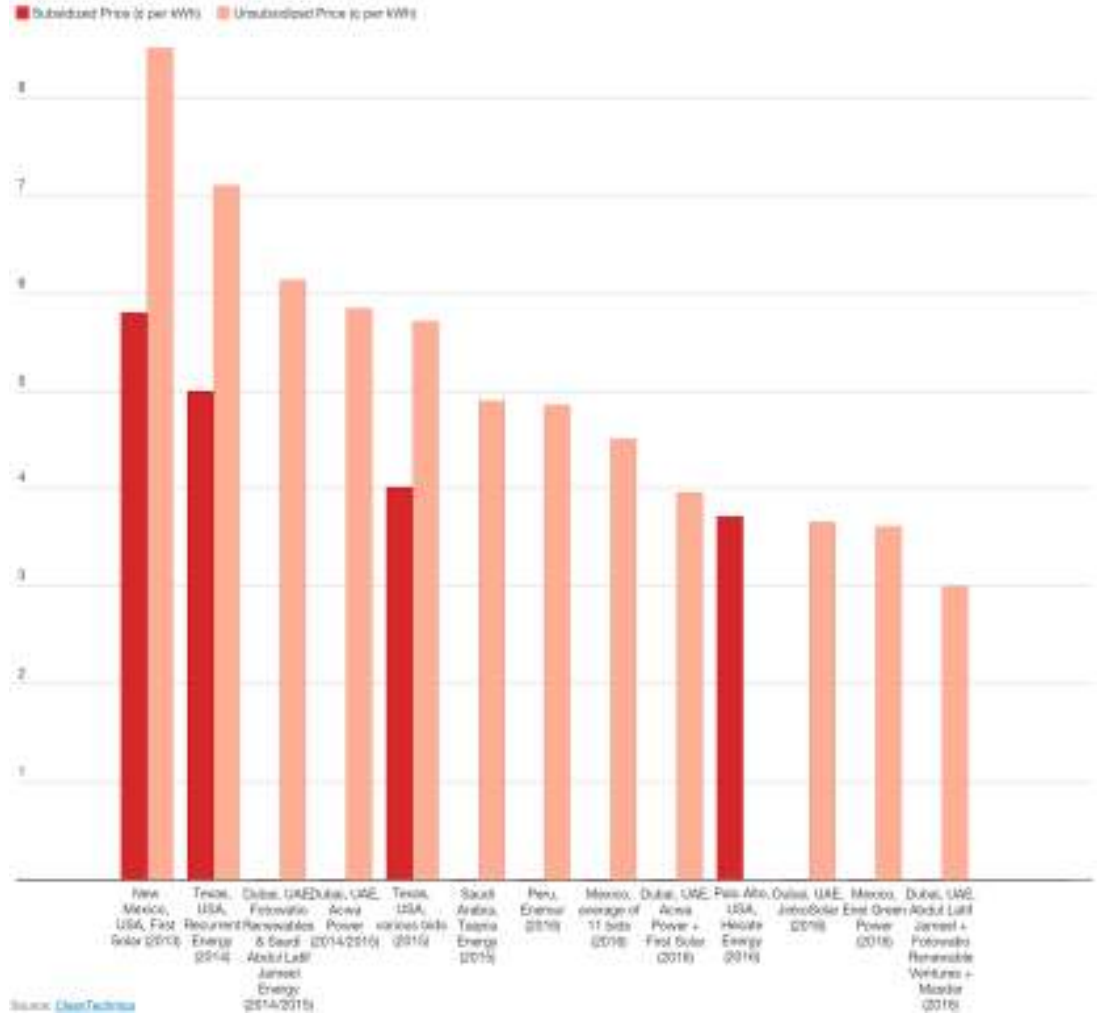


3424 km² of PV panels



Low Solar Bids (2013-2016)

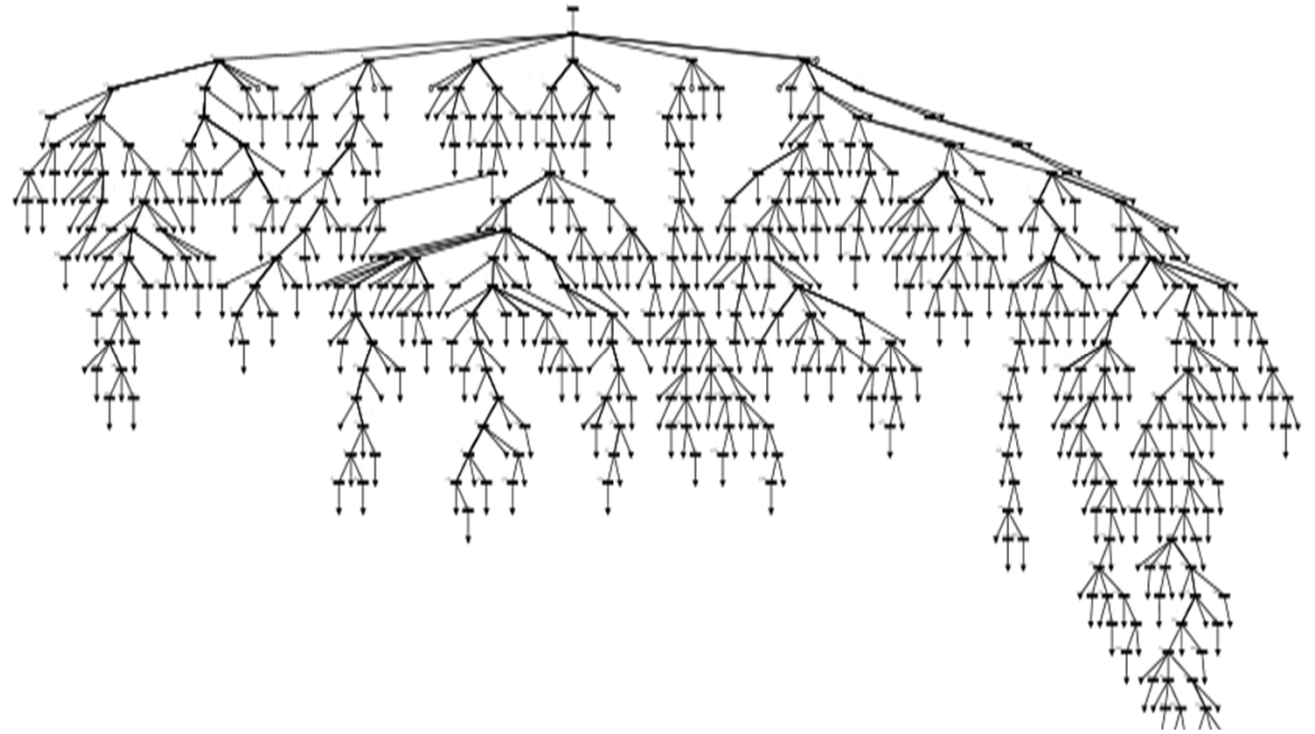
Prices agreed to under 20- and 25-year power purchase agreements. Note that the low bids in Texas are actually lower than the amounts represented in the chart... but exact figures have not been revealed.



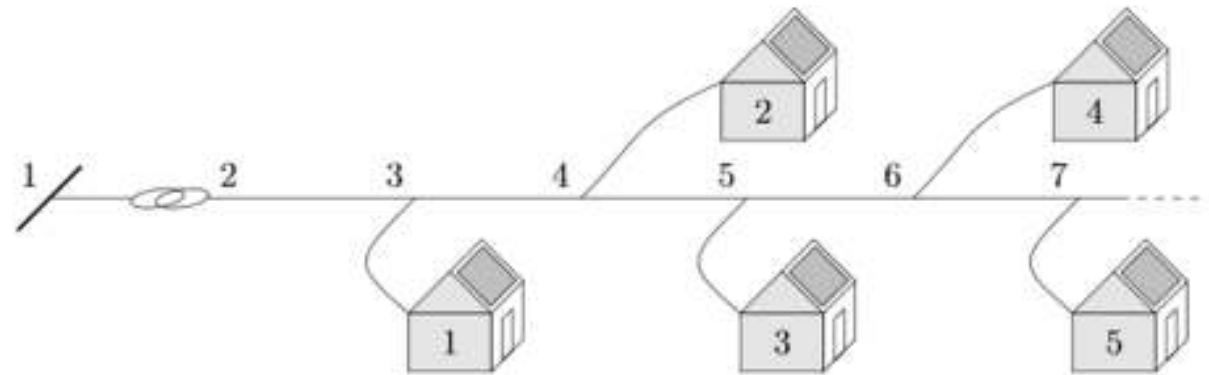


Hundreds of millions of Tesla batteries would be needed in a Belgium powered by PV.

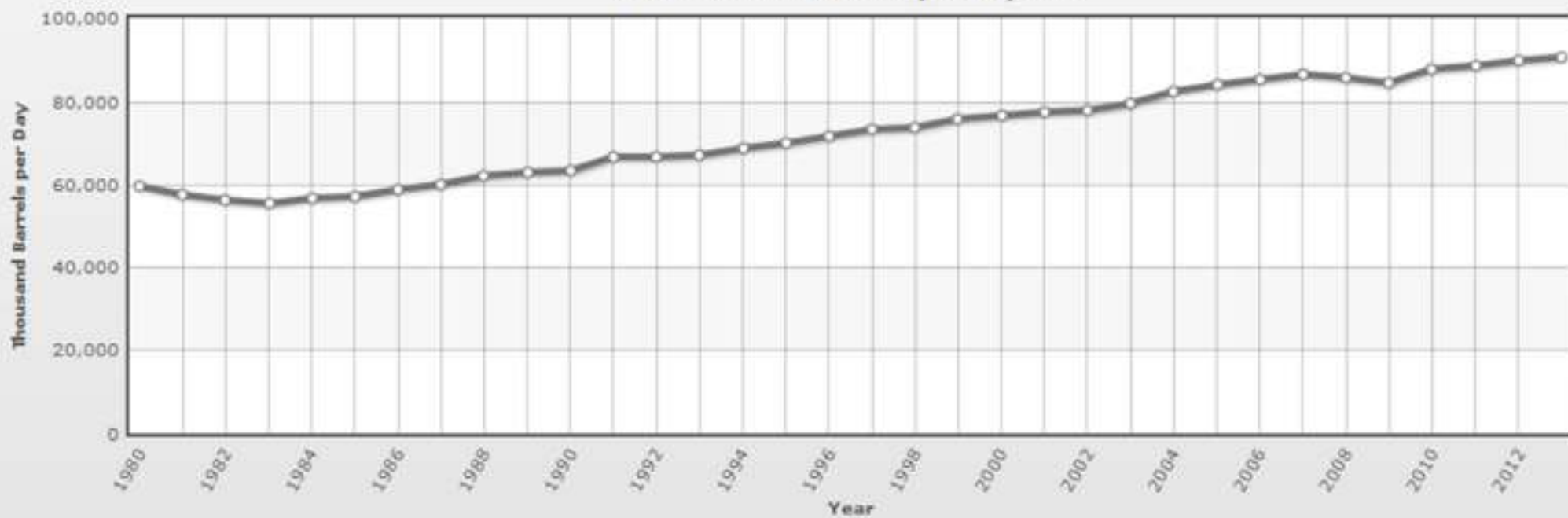
Storage, smart management of the system and investments in cables and lines: required for **integrating** significant amount of renewable energy into distribution networks.



Microgrids are also a key part of the solution.



World Crude Oil Consumption by Year





Saudi oil production rises to record level in July

Country usually pumps more crude oil during summer to meet seasonal power increase



The Utility Death Spiral Scenario Is Realistic

May 27, 2015 3:47 PM ET | Includes: EIX, PCG, PEG, PNW, SO



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Summary

- The central issue is that utilities should be allowed to...

Will Solar Cause A 'Death Spiral' For Utilities?



Christopher Helmen

Portfolio Manager

By **Jean-Marc Ollagnier**, *Accenture*

Solar panels are sprouting up fast and getting cheaper everyday. Soon some of the homes and businesses that own or lease these solar systems could "cut the cord" and unplug entirely from the power grids operated by their regional power utilities. But let's start by dispelling a myth. What has popularly become known in the industry as the utilities "death spiral" is extremely unlikely to occur. Distributed generation like solar will hurt, but power companies have time to manage the pain.

A scenario whereby a significant majority of customers generate their own electricity and migrate off the grid, or use it only as back-up, is simply uneconomic. This is



Accéder à la vidéo de la conférence:

<https://www.youtube.com/watch?v=2SJ14Sj33bl>