



Gas in the EU

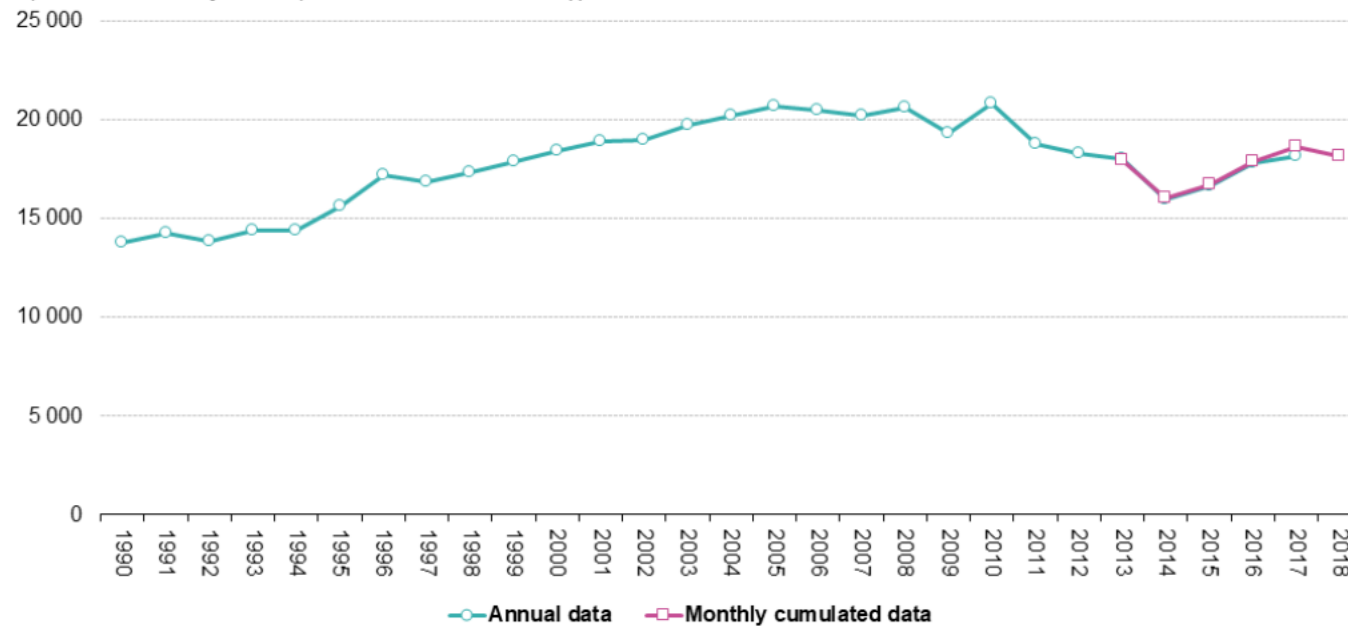
Gas Figures – Demand, Import, Climate impact

The “PCI list”

Alternative Gases

EU Gas demand

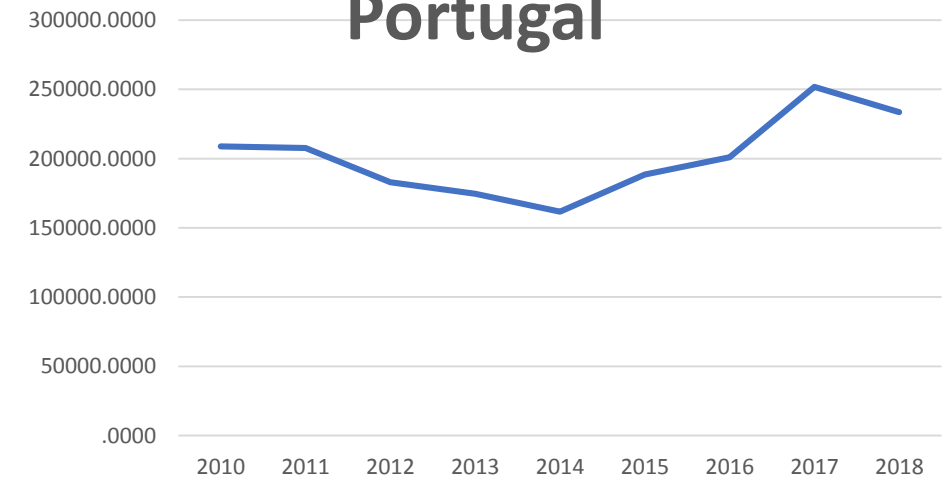
Gross inland consumption of natural gas, EU, 1990-2018
(thousand terajoules (Gross Calorific Value))



Note: Provisional data for monthly cumulated data for 2018
Source: Eurostat (online data codes: nrg_103m, nrg_cb_gas)

eurostat 

Portugal



EU LNG demand

- Mainly from Qatar, Nigeria, Algeria
- US & Russian shares growing
- Import dependency growing
- Pressure on EU domestic production?

THE INSANITY OF EUROPEAN LNG UTILISATION RATES

2019

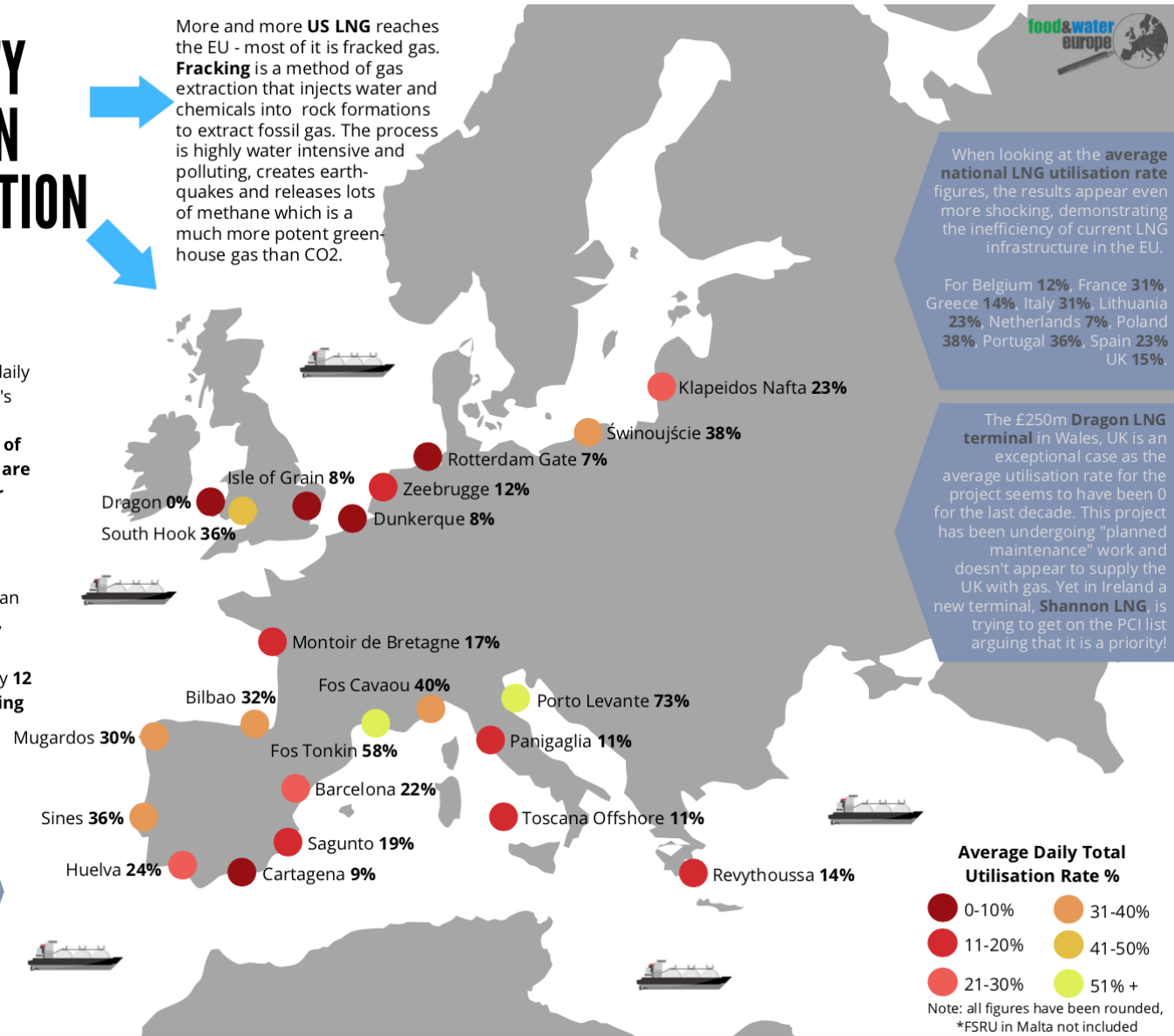
We took a look at the average daily total utilisation rates for the EU's current 22 large-scale LNG terminals*. We found that **90% of EU LNG large-scale terminals are used at less than 50% of their full capacity.**

On average, since 2012 all EU terminals have been used at only 23%! Clearly this not only an inefficient use of infrastructure, but a waste of EU money.

So why then, are there currently **12 proposed LNG projects applying for status on the PCI List?**

LNG stands for **Liquefied Natural Gas**. It is fossil gas that has been cooled down to liquid state so that it can be transported via ships across the world. It is turned back into gas at gasification plants. LNG can be more easily stored than fossil gas. As a result of increased **fracking** activity and pushes for EU-US gas trade, the number LNG cargoes from the US to Europe rose significantly.

More and more **US LNG** reaches the EU - most of it is **fracked gas**. **Fracking** is a method of gas extraction that injects water and chemicals into rock formations to extract fossil gas. The process is highly water intensive and polluting, creates earthquakes and releases lots of methane which is a much more potent greenhouse gas than CO2.



When looking at the **average national LNG utilisation rate** figures, the results appear even more shocking, demonstrating the inefficiency of current LNG infrastructure in the EU.

For Belgium 12%, France 31%, Greece 14%, Italy 31%, Lithuania 23%, Netherlands 7%, Poland 38%, Portugal 36%, Spain 23%, UK 15%.

The £250m **Dragon LNG terminal** in Wales, UK is an exceptional case as the average utilisation rate for the project seems to have been 0 for the last decade. This project has been undergoing "planned maintenance" work and doesn't appear to supply the UK with gas. Yet in Ireland a new terminal, **Shannon LNG**, is trying to get on the PCI list arguing that it is a priority!

LNG and the climate

Bloomberg Green

Energy & Science

Gas Exports Have a Dirty Secret: A Carbon Footprint Rivaling Coal's

New facilities to send LNG
away from climate goals.'



could move U.S. 'further

Robert Howarth @howarth_cornell · 9 Jan

LNG is not only dangerous: it has an even greater greenhouse gas footprint than regular shale gas. It takes a lot of energy to liquefy the gas and keep in cold. The gas industry uses a lot of gas for this energy, increasing emissions of both CO₂ & methane by 25% over regular gas.

→ Only operating the existing & planned LNG terminals in the US would **cause CO₂ emissions equaling 24 coal power plants**. They also belch toxic gases such as sulfur dioxide and release excess methane

IS NATURAL GAS A FRIEND OF THE CLIMATE?

The climate impact of leakage of US fracking gas transported to the EU

Gas is between 87% and 97% methane



3% Above this percentage of leaks in the supply chain, gas loses its climate benefit over coal

IEA 2017

7.9%
total methane leakage
in the supply chain

Howarth et al. 2011

5 LNG CARRIERS

have arrived in Europe in 2016 carrying gas extracted by fracking in the US



These carriers were chartered by the following companies:

Cheniere (also the owner of the Sabine Pass liquefaction plant), **Shell** (one of the largest gas vendors in the world), **Vitol**, **Trafigura** and **BG Group**.

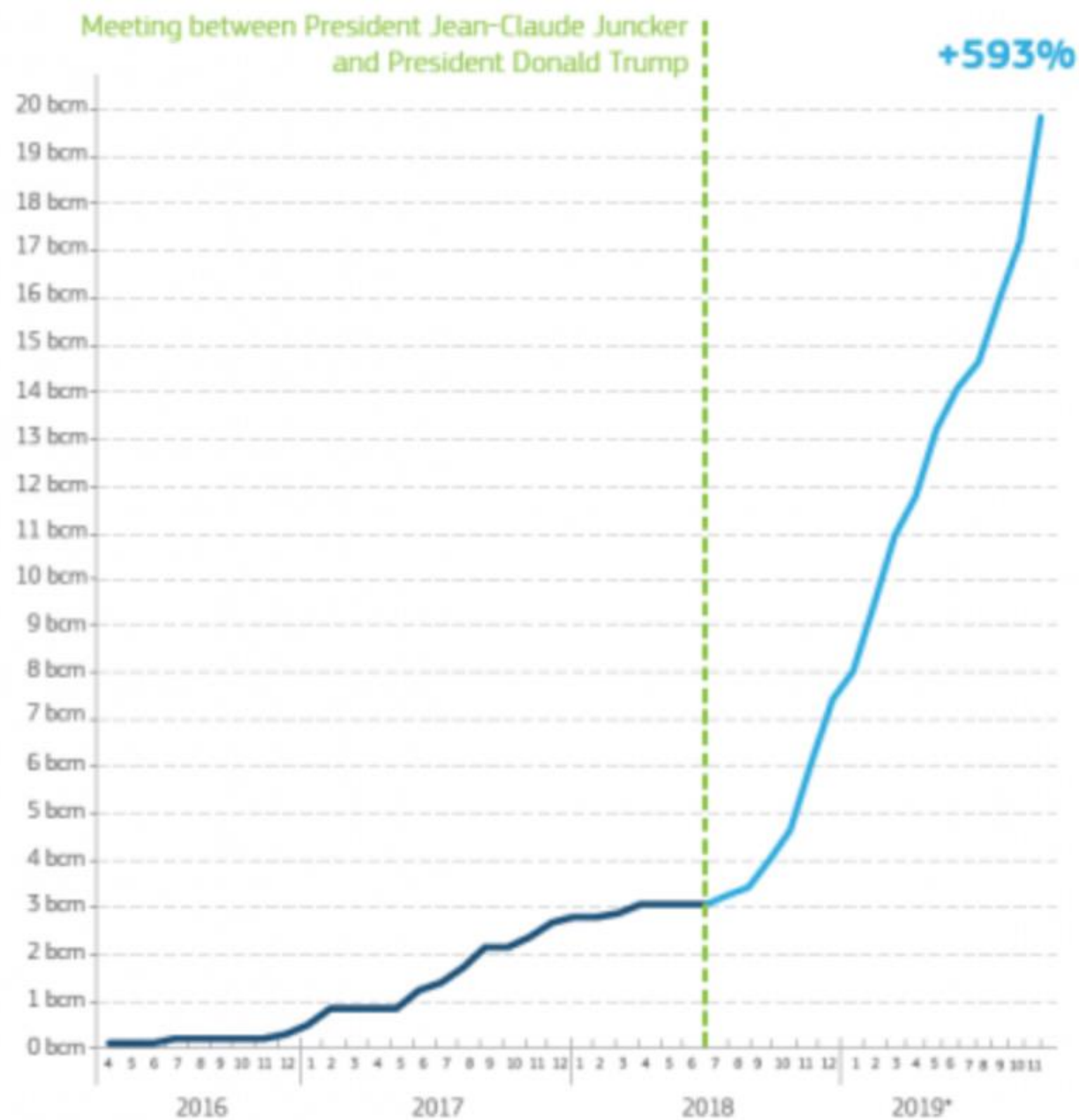
Leakage from them is equivalent to the annual emissions of

325,000
European citizens



US LNG exports to the EU are on the rise

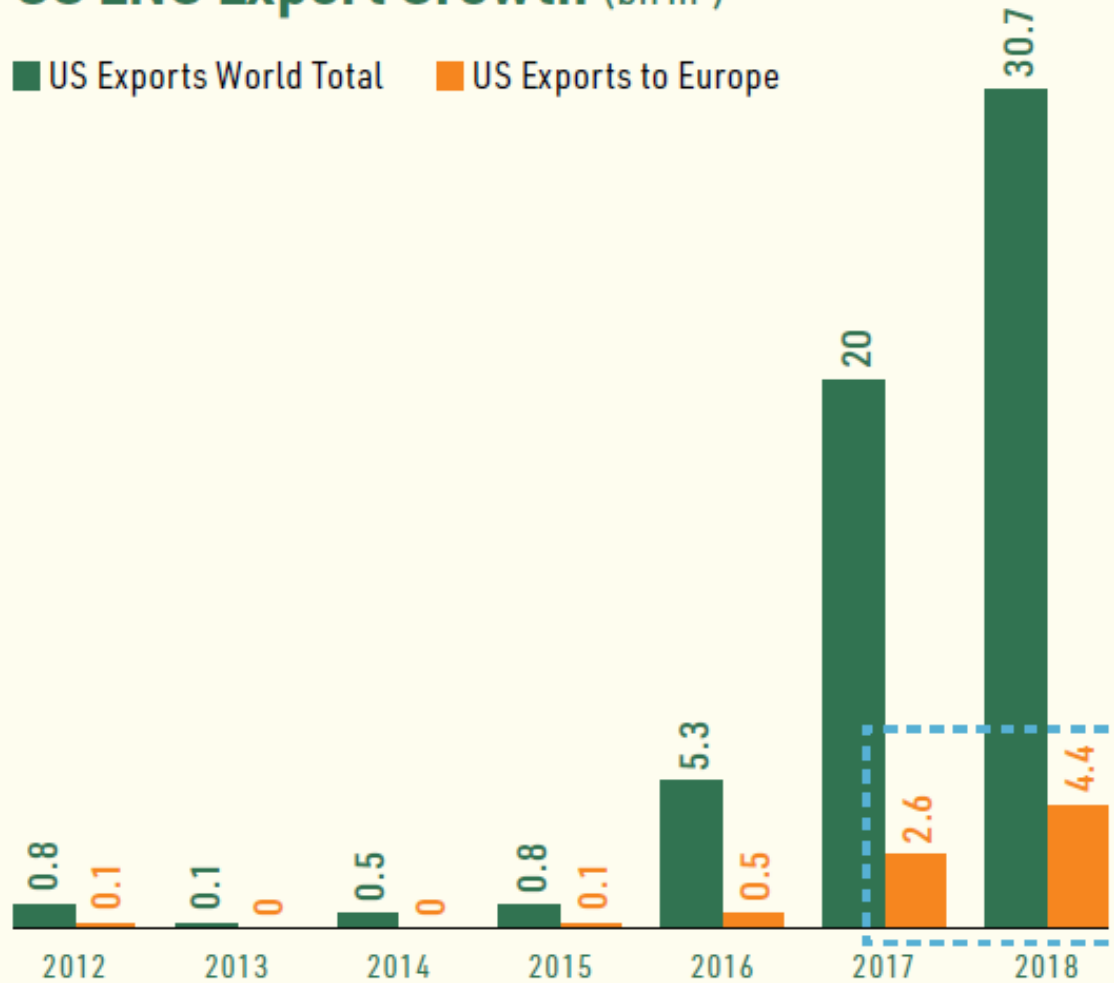
(in billion cubic meters - cumulative)



Focus US LNG

US LNG Export Growth (bn m³)

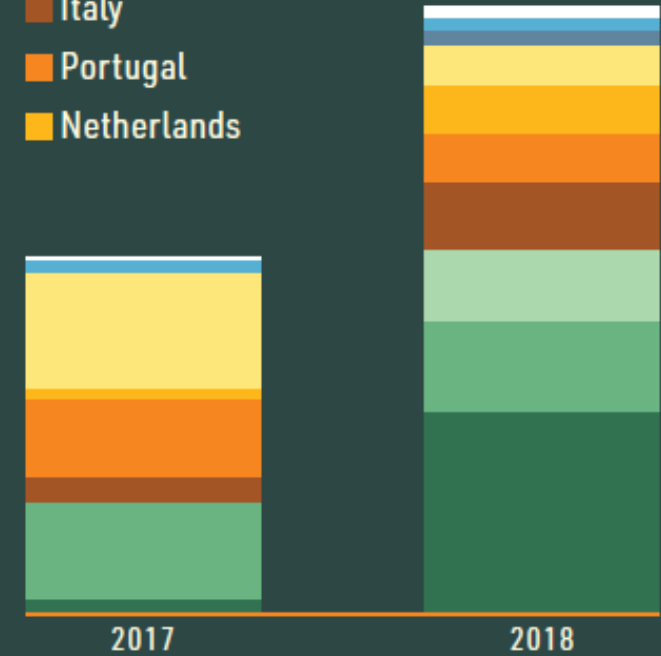
■ US Exports World Total ■ US Exports to Europe



Source: EIA

US LNG Exports to Europe (bn m³)

■ United Kingdom ■ Spain ■ Poland
■ Turkey ■ Greece ■ Malta
■ France
■ Italy
■ Portugal
■ Netherlands



Source: EIA

U.S. LNG cargo heading for Portugal

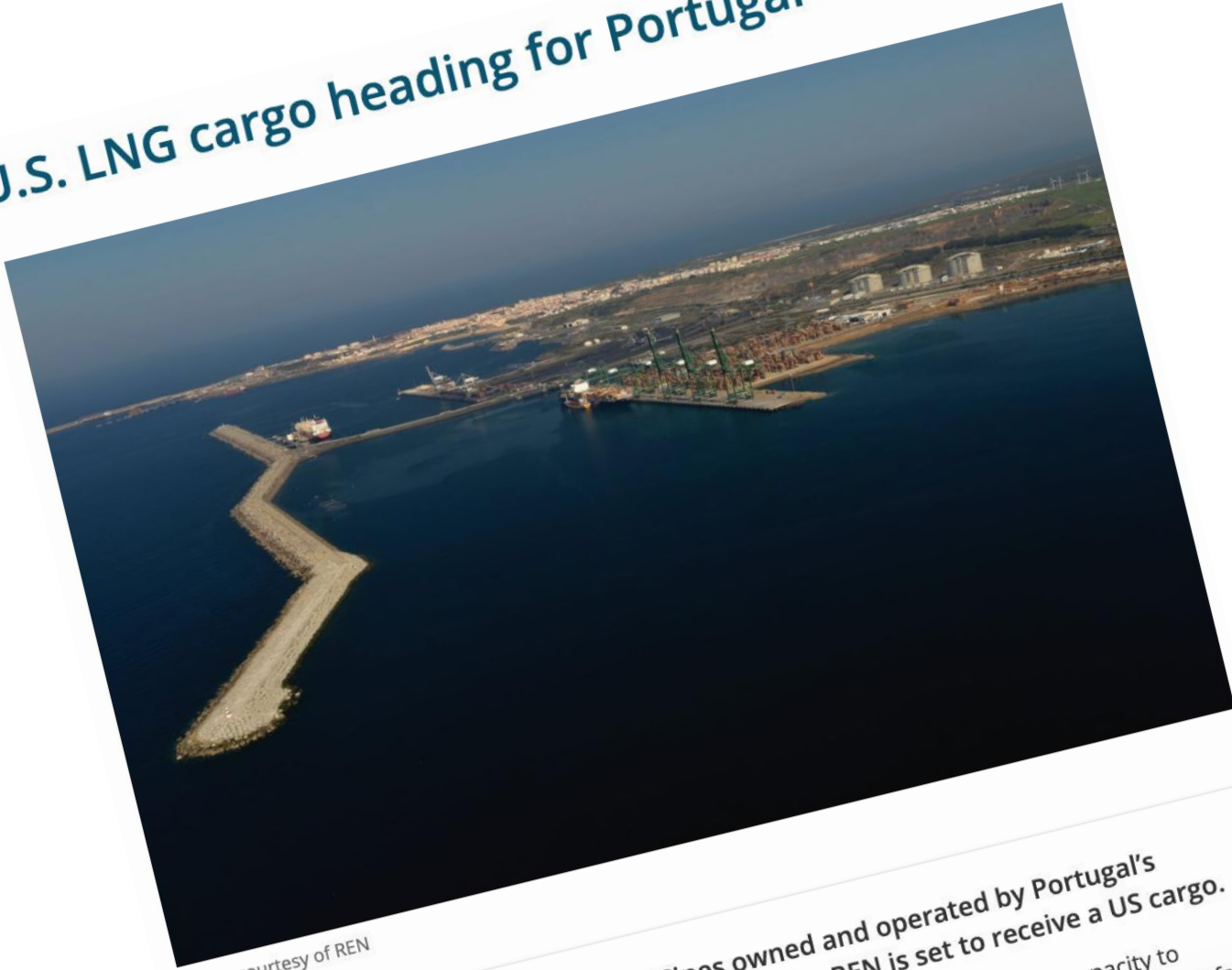


Image courtesy of REN

LNG receiving terminal at the port of Sines owned and operated by Portugal's electricity and natural gas infrastructure operator REN is set to receive a US cargo.

According to the shipping data by the Port of Sines, Cool Explorer tanker with the capacity to transport up to 160,000 cbm cubic meters of liquefied natural gas, is scheduled to arrive at the facility on January 12.

How to stop an LNG terminal 😊

a) Lots of people
Power & clever
campaigners



↳ Fossilgasfällan Retweeted

Greta Thunberg @GretaThunberg · 11 Oct 2019

The huge, proposed new fossil gas terminal in Göteborg has been denied its final permit and will not be built because of the climate crisis. Activism works. So act! [#folkmotfossilgas](#) [#WeWonGothenburg](#)

Fossilgasfällan @fossilgasfällan · 10 Oct 2019


[BREAKING] NEJ TILL FOSSILGAS I GÖTEBORGS HAMN
Vi har skrivit historia! TV4 Nyheterna imorse meddelade att regeringen idag nekar Swedegas koncessionstillstånd.
[#WeWonGothenburg](#) [#FolkMotFossilgas](#) [#NoNewGas](#)

b) Mass civil disobedience actions



c) A progressive government

The new EU Commission– Gas business as usual?

A photograph of Ursula von der Leyen, President of the European Commission, speaking at a podium. She is wearing a red jacket over a white collared shirt. Two speech bubbles are overlaid on the image, pointing to her. The background is a blurred grey.

*Gas will have a role to play in the **transition** towards a carbon-neutral economy, notably **through carbon capture and storage**.*

*(...) assess how sources of supply can be diversified at competitive prices, in particular by making full use of the potential of affordable **liquefied natural gas***

Mission Letter to Kadri Simson

What will happen on EU level?

- “New” Parliament & Commission
- EU Green Deal – have an eye on gas!
- How to integrate “renewable gases” in the gas market
- Methane strategy
- TEN-E revision (pressure works!)
- Gas “decarbonization” package

The PCI list – EU's top fossil infrastructure

- Benefits for environmental impact assessment, permitting procedure & access to EU money
 - Connecting Europe Facility (CEF)
 - already over €1.6bn
 - European Investment Bank (EIB) etc.
- Highest support & EU tax money for fossil fuel projects, often not economically viable, stranded assets
- First emblematic test on EU Green Deal



Mark Ruffalo ✓ @MarkRuffalo · 28 Jan

Friends in Europe, the EU is about to drive climate off a cliff! €29B could be wasted on 32 fracked gas projects in contradiction to [#EUGreenDeal](#). There's still time to stop it before [@Europarl_EN](#) vote in mid-Feb! [#FridaysForFuture](#) [@Avaaz](#) [@FoodWaterEurope](#)



**The
Guardian**

EU could waste €29bn on gas projects despite climate action plan

5 key reasons to reject the 4th PCI list:



The gas projects on the PCI list are **not compatible with keeping the world within 1.5 °C** of global warming, nor with the **Paris Agreement** or with EU climate targets and gas demand projections.



The gas projects on the list are **fossil gas projects**, despite increasing talk of "alternative gases".



Continued support of and investment in fossil gas projects, such as gas PCIs, risks creating significant **stranded assets**, **channeling money away from renewables**.



The gas projects will **not deliver energy independence**.



The selection process for gas PCIs is **untransparent** and heavily influenced by **vested interests**.

What you can do:

- **Email / call** your parliamentarian:

→ All Portuguese parliamentarians' names are here:
<http://gasparatras.pt/2020/02/02/contacta-os-teus-eurodeputados/>

- **Make** some pressure on **twitter**:

→ Check @FoodWaterEurope, use #PCIIlist and #NoGasOnPCIIlist

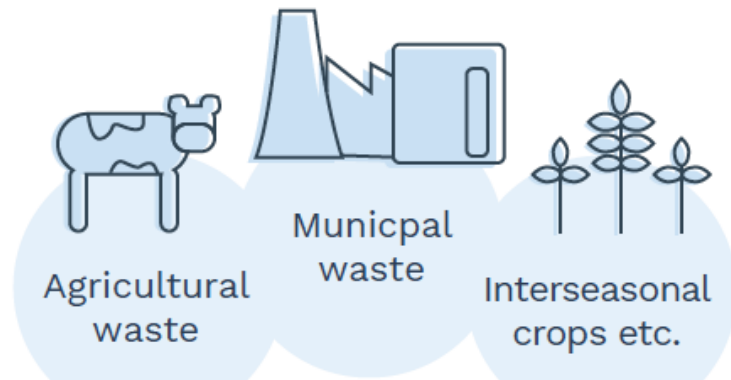
pt	João	FERREIRA	joao.ferreira@europarl.eu
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pt	José Manuel	FERNANDES	josemanuel.fernandes@ep.europa.eu

Confused by these new gases? Understandable, since numerous (not entirely overlapping) terms exist for gases which are not “natural gas”: Renewable gas, non-fossil gas, green gas, decarbonized gas, ... we summarize them as **“Alternative Gasses”**

“Alternative” Gases

Biogas/Bio Methane

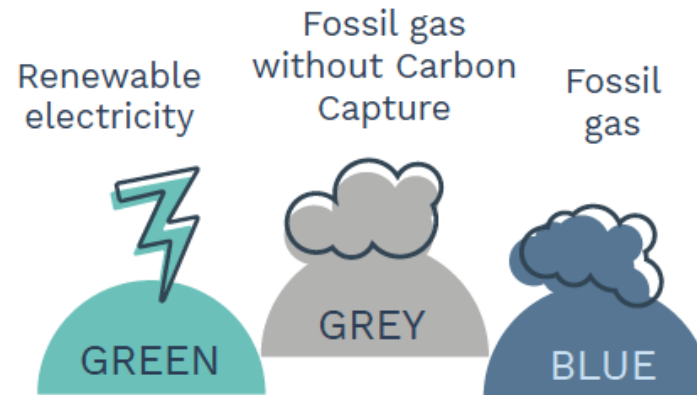
Made from:



- ❌ Methane & CO₂ emissions during production, transport and consumption remain
- ❌ Some biogasses come with land grabbing, incentives for mega-farms and to increase waste production, competition with food production, rise in fertilizer use, etc.

Hydrogen

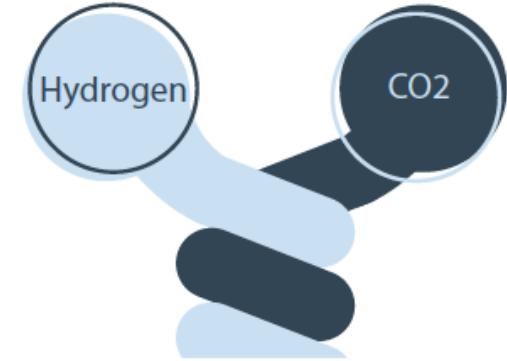
Produced from:



- ❌ Energy intensive process
- ❌ Largely incompatible with current gas grid: Fossil gas infrastructure can only be used at 10% of its capacity to transport hydrogen
- ❌ Massive climate impact: 96% of current hydrogen is made with fossil fuels
- ❌ Greenwashing: Blue hydrogen availability is uncertain as its dependent on the overly hyped and unproven technology of CCS

Synthetic Methane

Produced by mixing:
via ‘Power-to-Gas’



- ❌ Complex transformation processes with huge energy loss
- ❌ Based on hydrogen and thus coming with the same issues
- ❌ Same properties as fossil gas: Methane leaks & CO₂ emissions during production, transport and consumption remain

Hydrogen – green chance or fake solution?



Portugal negotiates with Netherlands mega hydrogen plant in Sines

ECO News
19 November 2019



The government is in negotiations with the Netherlands to set up a green hydrogen production plant in Sines.

Obrigada!

Frida Kieninger

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**FOOD &
WATER
ACTION
EUROPE**

