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**IENE**

**26ο Ετήσιο Εθνικό Συνέδριο «Ενέργεια και Ανάπτυξη»**



*22-23 Νοεμβρίου 2022*

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# Energy crisis causing ‘significant harm to EU consumers’

According to CREA (Centre for Research on Energy and Clean Air) estimates, since the beginning of the war (24/02/2022), Russia earned **EUR 230 billion** in revenue from fossil fuel exports. European Union countries purchased for more than **EUR 117 billion**.

*Last update: 21 November 2022*

## 🌐 Global payments

# 230 683 254 244 EUR



Oil (63%)

**145 559M EUR**



Fossil gas (29%)

**66 320M EUR**



Coal (8%)

**18 802M EUR**



## 🇪🇺 European Union

# 117 436 966 147 EUR



Oil (54%)

**64 426M EUR**



Fossil gas (44%)

**49 835M EUR**

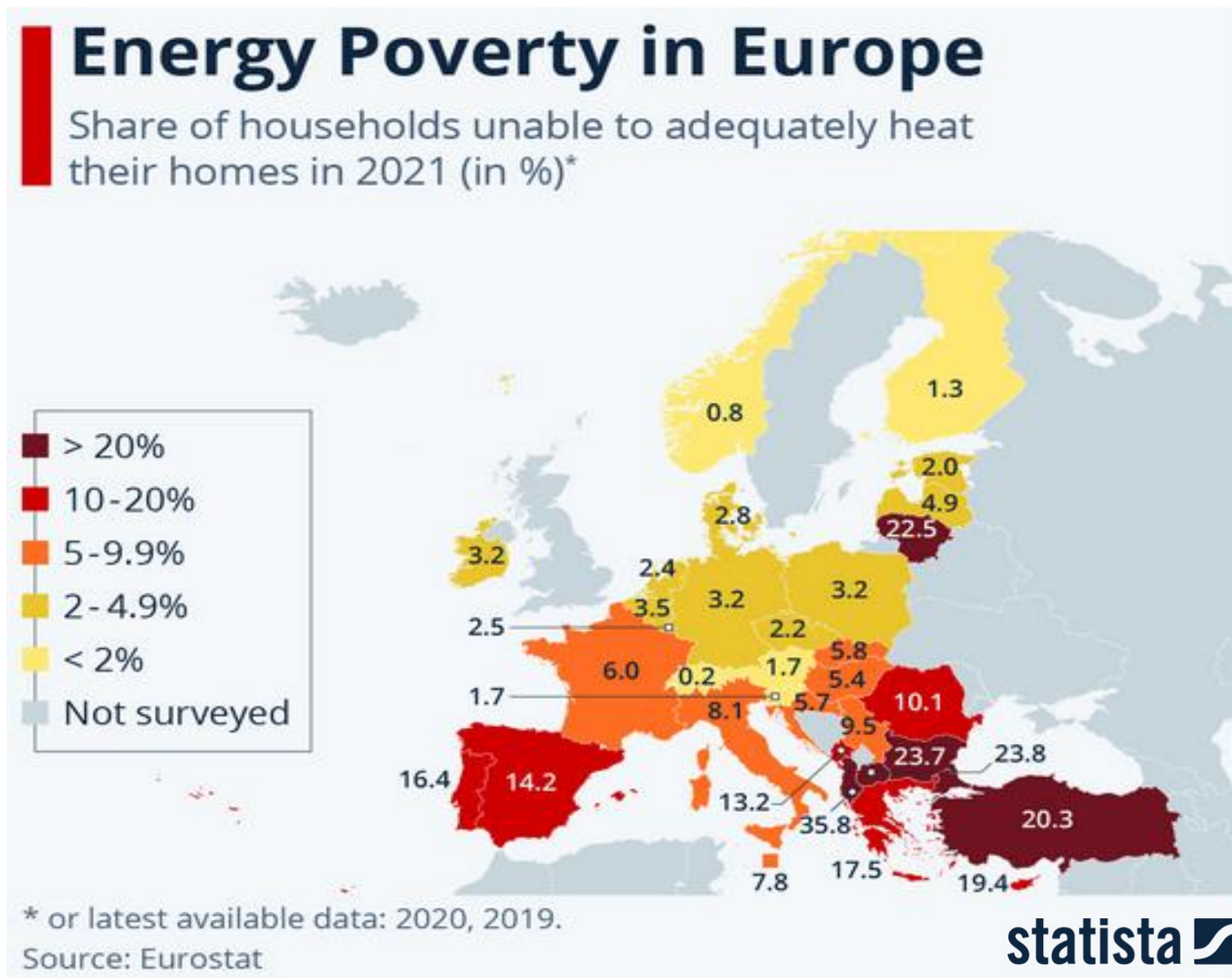


Coal (2%)

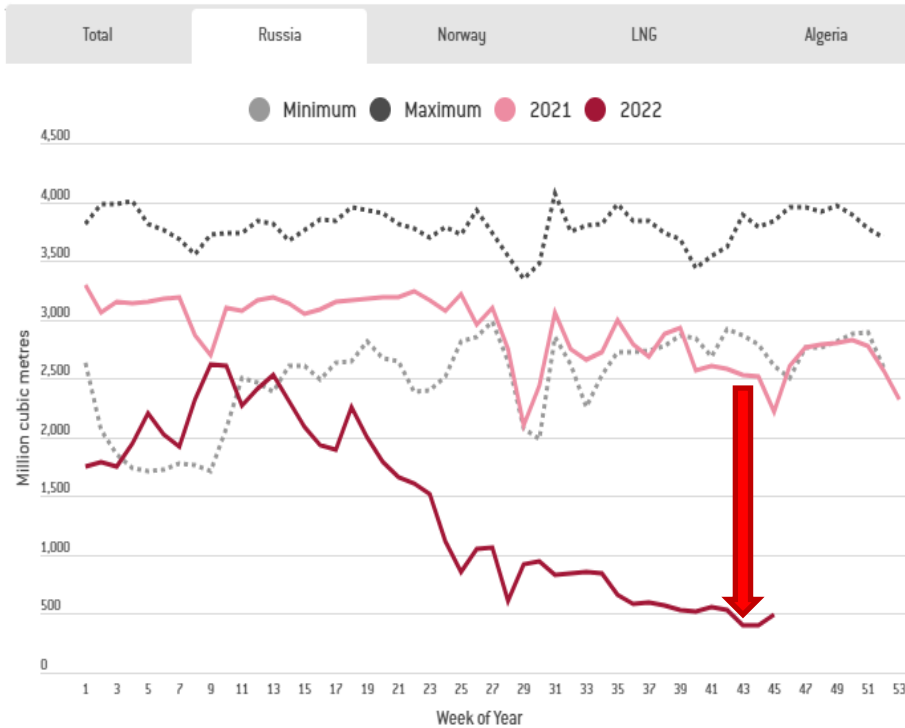
**3 174M EUR**



When data for 2022 comes out, the figures will be much worse

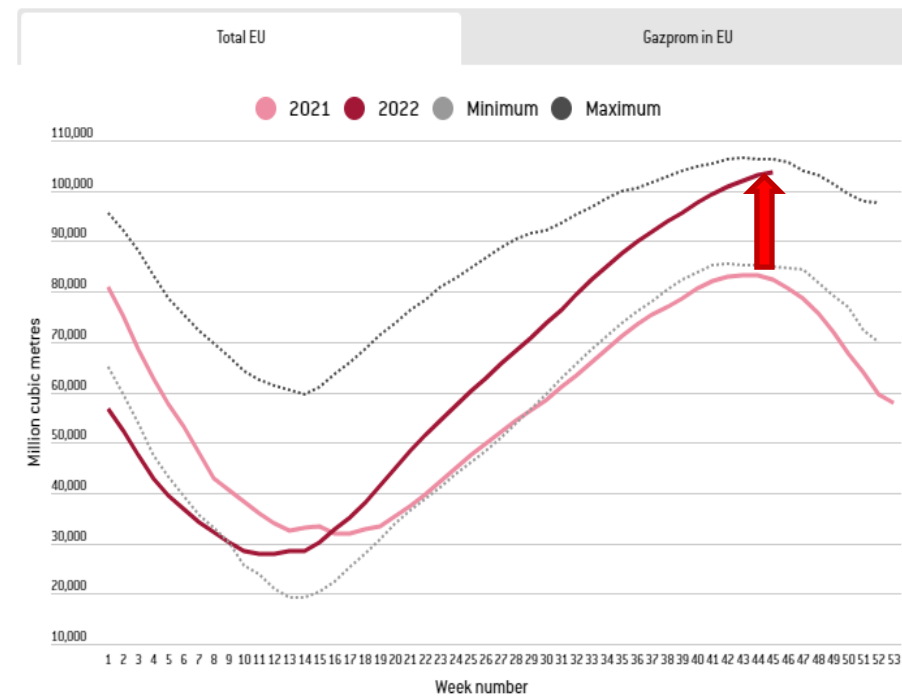


Russia cut 80% of its gas supplies to Europe...



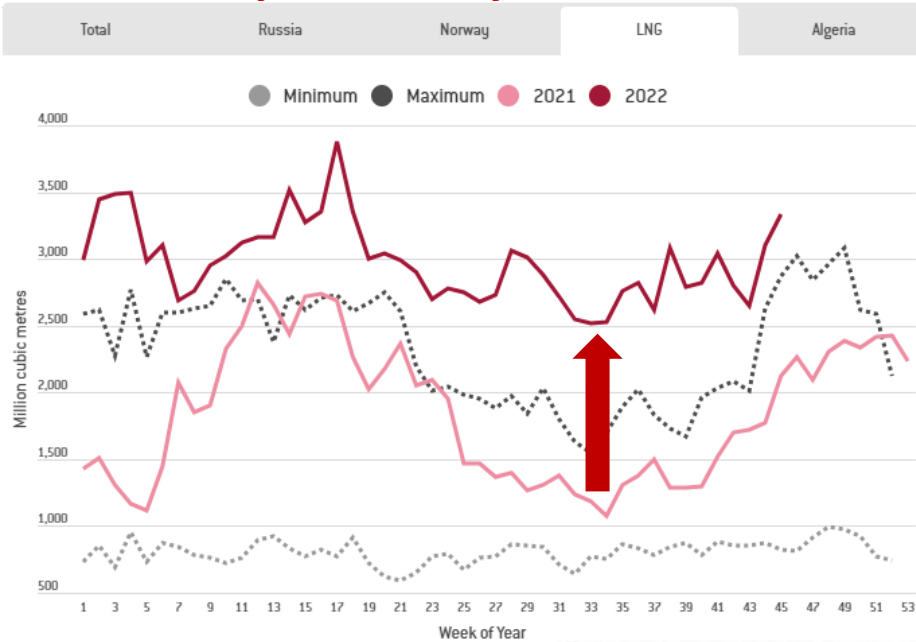
Source: ENTSO-G, <https://transparency.entsog.eu/#/map>  
 Note: Minimum and Maximum values are calculated from the period 2015-2020.

...but Europe managed to refill its storages

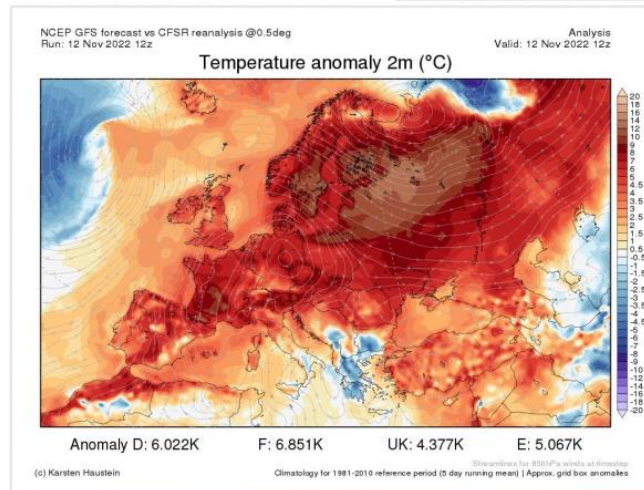
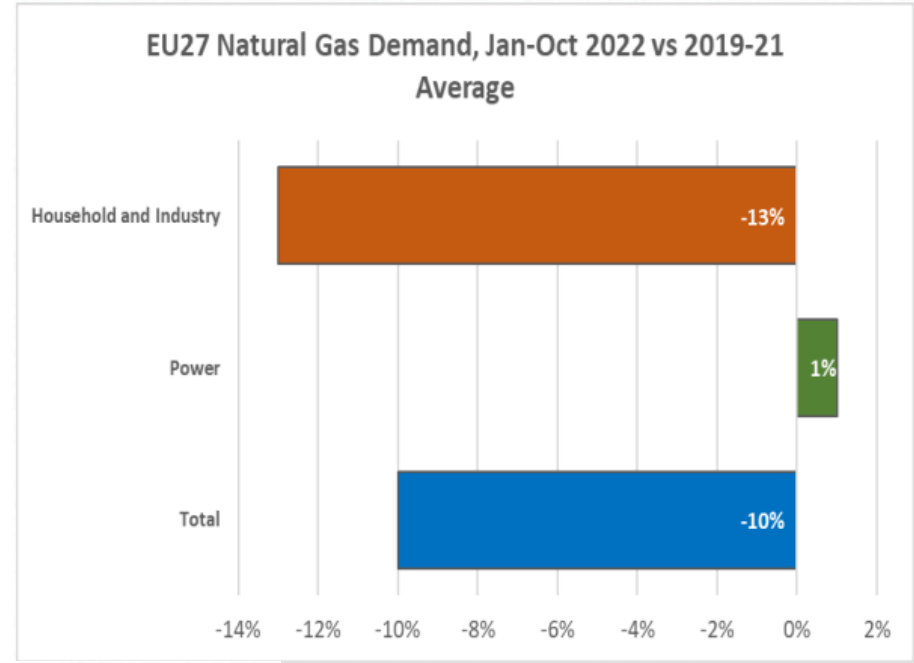


Source: AGSI: <https://agsi.gie.eu/#/>  
 Note: Minimum and Maximum values are calculated from the period 2015-2020.

## LNG Y-o-y increase by 70%



## Y-o-y NG Demand reduction of 10%



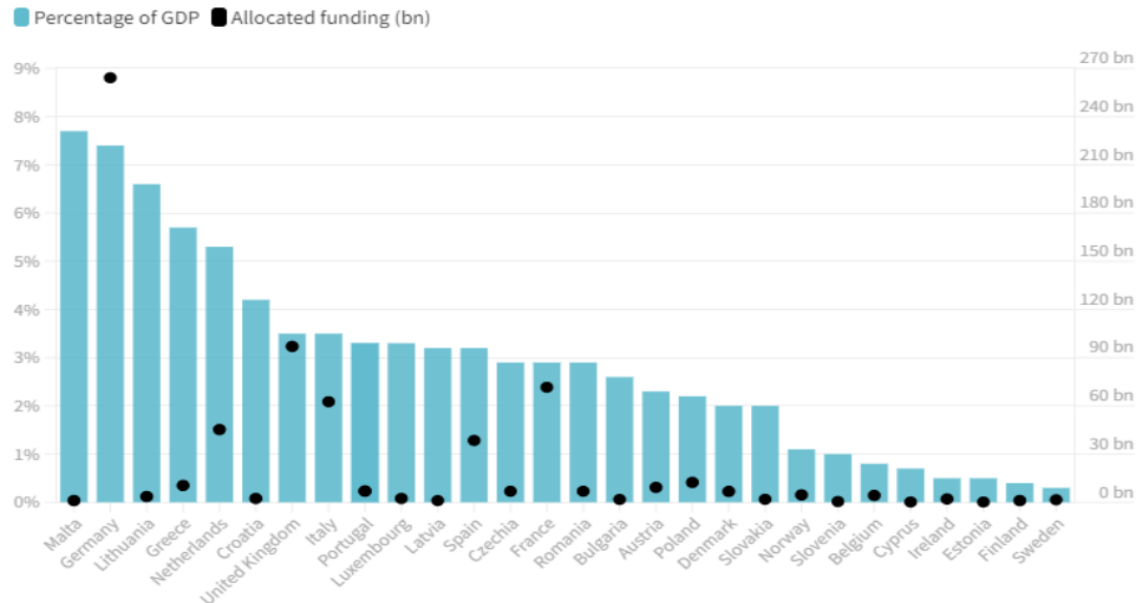
**A bit of luck,  
Weather so far warmer  
than usual**

# All of this came at a high cost, with important fiscal implications



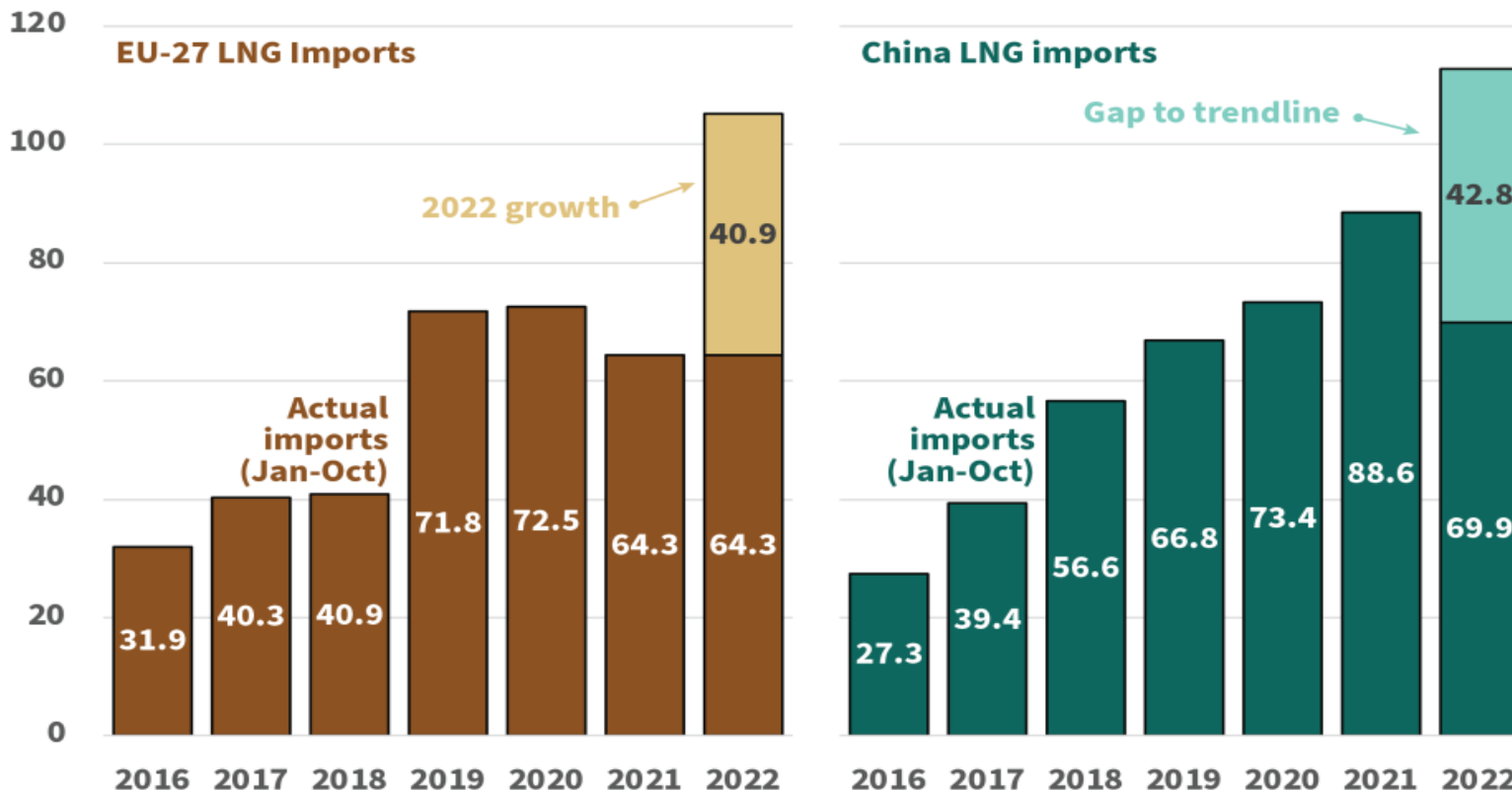
**TTF evolution**  
*Increase vs Jan 2021*  
**3.5 to 18 times**

**Since Sept 2021, European governments earmarked and allocated 674 billion € to tackle high energy prices**



## Growth in EU LNG Imports Mirrors Decline in China's LNG Imports

billion cubic meters



Source: Kpler LNG Service. Data to October 31, 2022.

### Key elements of uncertainty:

- 1) Fate of remaining Russian gas supplies, 2) French nuclear developments, 3) China's LNG demand outlook, 4) Weather, 5) Type of demand reduction

**We are in good shape for this winter,  
....But the issue is not this winter....**

**It will be the next one, because we are not going to  
have Russian gas – 98% [less] next year, maybe  
nothing.**



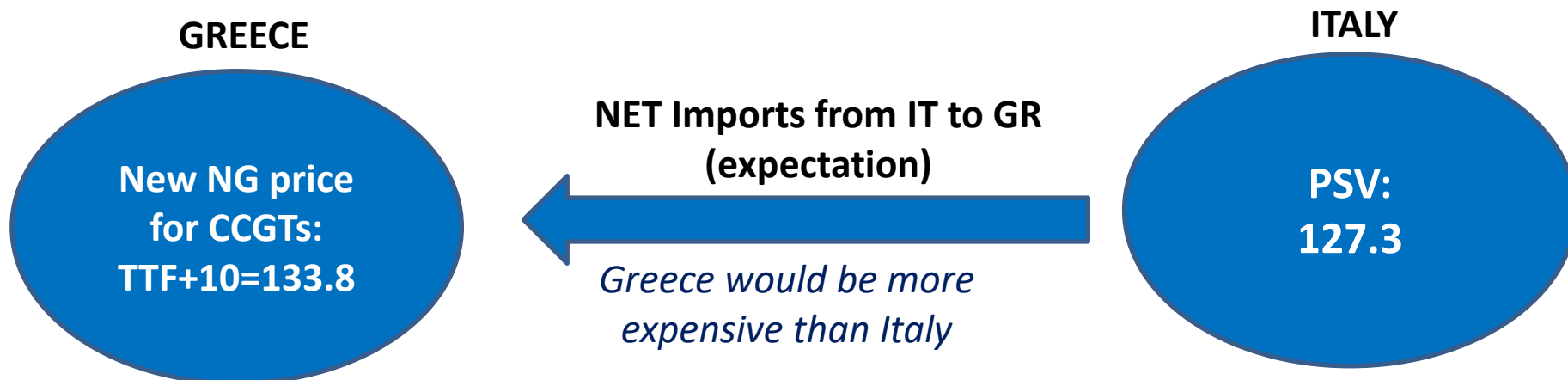
**Due to the post war energy prices impact, in Greece three major interventions in the electricity markets were already introduced:**

- **At the wholesale market, a cap per electricity generation technology was introduced in July 2022**
- **At the retail market, since August 2022 ex-post clauses (indexation) were temporarily abandoned. Suppliers are obliged to offer fixed monthly tariffs for customers and publish them on the 20<sup>th</sup> of M-1. Throughout the duration of this measure, customers may change supplier without any early departure implication.**
- **From November 1<sup>st</sup> 2022 an additional levy of 10 €/MWhg is applied upon natural gas quantities used for power generation.**

## Cross Border Flow before Levy



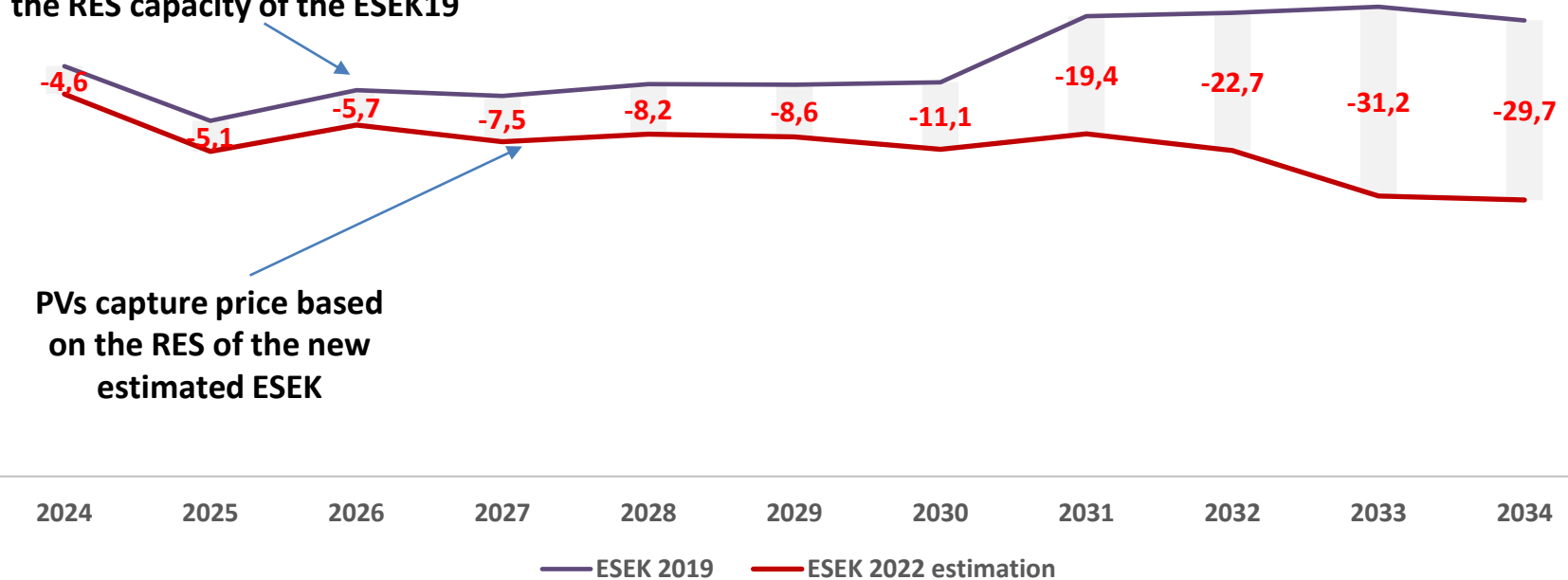
## Cross Border Flow (expected) after Levy. The 'target' is to become NET importers



**After NG levy, Greece will decrease its CCGTs production due to increased imports.... nevertheless Italy will increase its CCGTs production respectively, in order to cover part of the Greek Demand.**

### Study - RES installed capacity impact on PVs PPAs evaluation (€/MWh)

PVs capture price based on the RES capacity of the ESEK19



PVs capture price based on the RES of the new estimated ESEK

New ESEK (estimation):

- Additional (compared to ESEK2019) 10GW RES up to 2030
- Additional 5GW RES from 2031 to 2034

**Conclusion of the study:** PVs average capture price, from 2024 to 2034, drops ~ **14 €/MWh** due to increased (ESEK2019 vs New ESEK) RES penetration

**THANK YOU  
FOR YOUR ATTENTION**

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ELPEDISON S.A.**