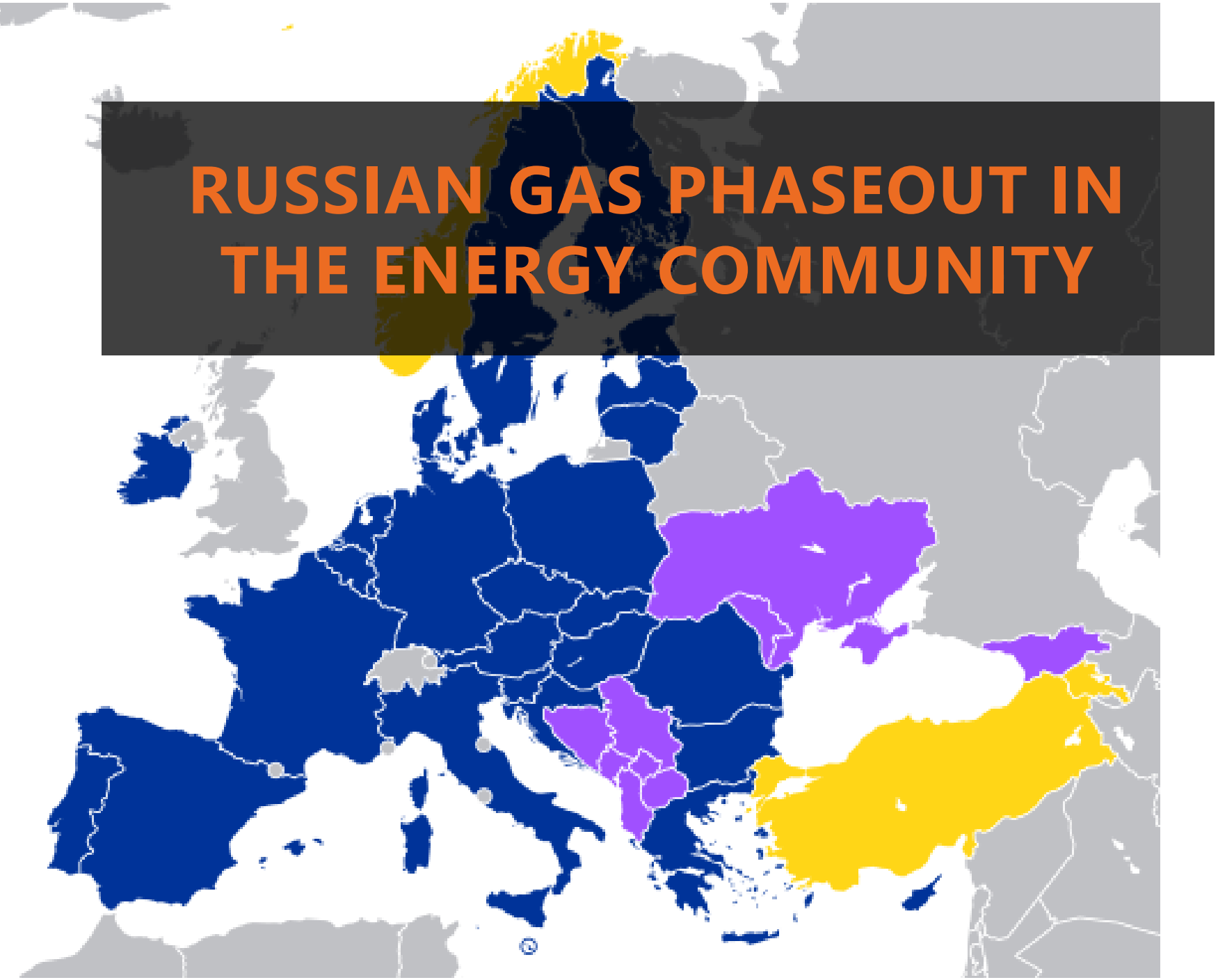


RUSSIAN GAS PHASEOUT IN THE ENERGY COMMUNITY

Modelling the REPowerEU Roadmap by 2028

Péter Kotek
Borbála Takácsné Tóth

01.06.2026.
Kraków

Commissioned by the Energy Community Secretariat

About REKK

- REKK is a think tank at Corvinus University of Budapest
- Established in 2004, with a core team of 20 researchers
- Our focus is electricity, natural gas and energy and water markets in Hungary, CEE and Europe
- We provide data based policy analysis for regulators, international organisatons and energy companies

Study context: the REPowerEU ROADMAP

- As a part of the REPowerEU Roadmap, Regulation (EU) 2026/261 on phasing out Russian natural gas imports and preparing the phase-out of Russian oil imports, improving monitoring of potential energy dependencies and amending Regulation (EU) 2017/1938 ("the Regulation") was approved in the EU on 26 January 2026.
- The Regulation sets tight deadlines for phasing out Russian gas supplies:
  - short-term contracts by spring 2026,
  - long-term contracts by September 2027,
- Such a ban will have direct and indirect consequences on the Energy Community Contracting Parties, including those who have already phased out Russian supplies, and even without the Regulation being adopted by the Energy Community.
- The study shall inform the members of the Security of Supply Group and the PHLG, and Contracting Parties policy decision makers of its impact assessment on security of supply and affordability of replacement quantities and capacities.

Background

- REKK performed a modelling based assessment in December 2025 on the impact on wholesale gas prices and on the Danube Region countries of the REPowerEU Roadmap timing.
- The main results of the analysis were published in a policy brief focusing on the impacts of the REPowerEU strategy on the EU27 gas prices.
- On 27.01.2026. the results were presented in a CESEC Gas meeting with a focus on the CESEC region
- Based on those results the Energy Community Secretariat requested REKK to rerun the scenarios under stricter assumptions to evaluate the possible negative impacts of extending the Roadmap to Energy Community Contracting parties. The goal is to have a clear picture of the consequences of such a move.

DR MODELLING 2025

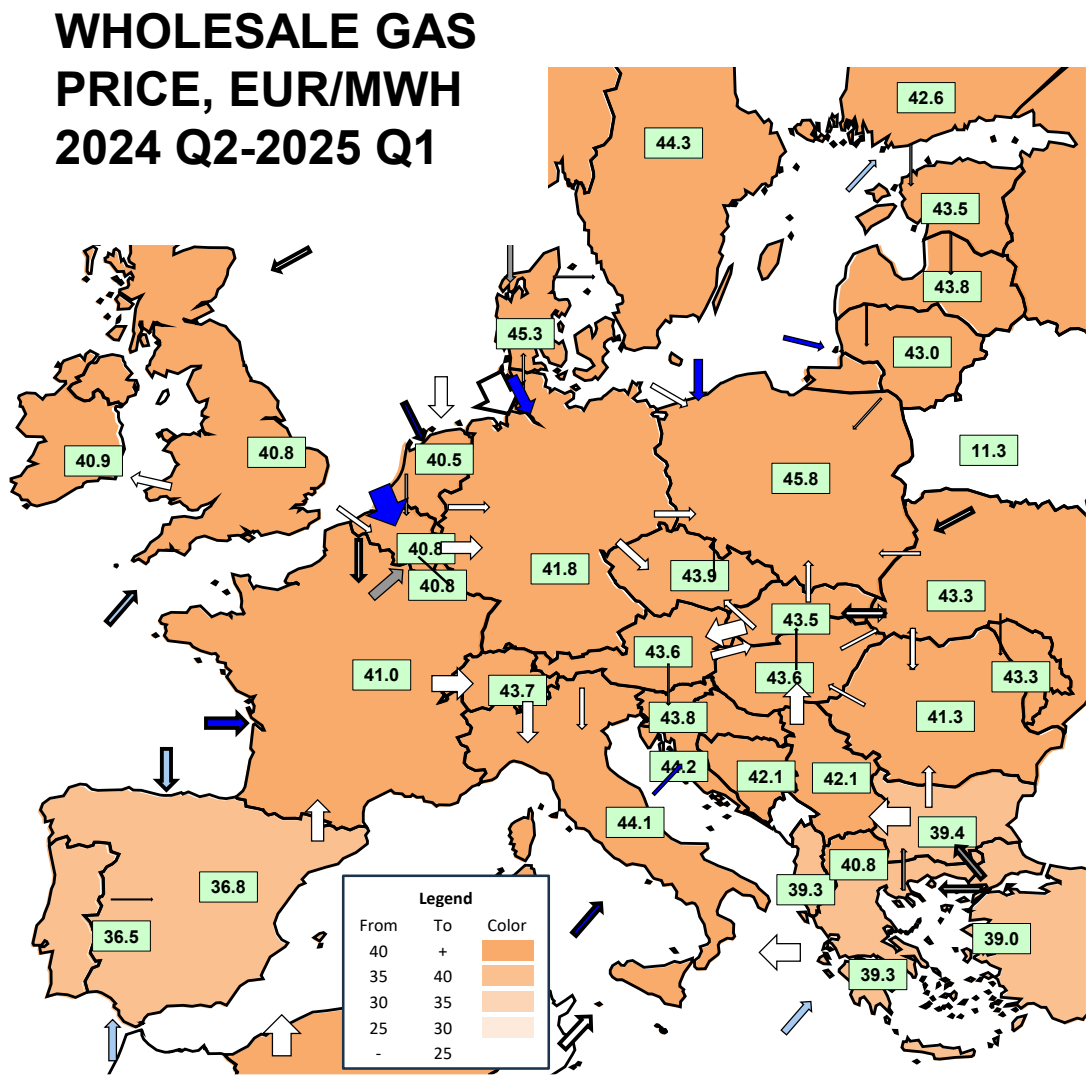
POLICY BRIEF

CESEC PRESENTATION

METHODOLOGY AND ASSUMPTIONS

European Gas Market Model – major characteristics

- EU (26) + Energy Community CPs (7) + UK + CH + TR +BY + AM = 38 countries are modelled
  (CY, ME and KO* not included as no gas market is there)
- Trade is based on long term contracts and spot trade within the modelled and with exogenous countries and global LNG market (NO, RU, LNG)
- LNG market representation is linked to Asian LNG prices (indicated by JKM marker)
- Physical constraints are interconnection capacities (transmission tariffs are also included)
- Trade constraints: TOP obligations with flexibility
- Domestic production and storage facilities are included
- Main output:
  - Competitive prices by countries; price modelled for each 12 months (in boxes)
  - Natural gas flows and congestions on interconnectors (arrows)



Detailed description of EGMM:
[Péter Kotek, Adrienn Selei, Borbála Takácsné Tóth, Balázs Felsmann (2023): What can the EU do to address the high natural gas prices?, Energy Policy, Volume 173:113312, ISSN 0301-4215](), Annex 3

Data sources

Input data	Unit	Source of data	Further assumptions
1. Demand	TWh/year	Eurostat, Jodigas, National trends (ENTSOG TYNPD 2024)	For ENC CPs data is provided by the Secretariat
2. Production	TWh/year, max GWh/day		RO offshore production comes online from 2027
3. Pipeline capacity	GWh/day	ENTSOG capacity map, TYNDP 2024	Only 10% of Balkanstream capacities can be used for non-Russian gas trading in the Repower scenarios due to long term bookings of Gazprom on the pipeline (TR-BG and BG-RS and RS-HU)
4. Storage capacity	GWh/day , TWh/year		80% target of storage obligation in EU27 applies, only 50% of RS storage can be used by the market (Gazprom ownership of Bantsky Dvor)
5. LNG capacity (regasification)	GWh/day		Additional +~400 TWh/yr (+10%) LNG regas capacity in EU27 to 2028
6. LNG capacity (liquefaction)	GWh/day	Global Energy Monitor Global Gas Infrastructure Tracker 2024	Additional + 3000 TWh/yr (+40%) global LNG liquefaction capacity to 2028
7. LNG transport cost	EUR/MWh	Distance-based calculation (day rate, canal fee, fuel cost)	Does change with the overall price environment
8. Tariffs (LNG regas, storage, pipeline entry and exit)	EUR/MWh	REKK calculation based on TSO published tariffs as of 2026	Does not change between different scenarios and global price level
9. LTC (ACQ, price, route, expiry)	TWh/year, flexibility, EUR/MWh	Eurostat, Gazprom, company annual reports,OIES, country statistics, REKK data collection	For the LNG contracts only DES contracts are included. Data for RU LTC contracts for ENC CPs were provided by the Secretariat.

Strong assumptions added to avoid underestimating the negative impacts

- Gazprom booked 90 % of the capacities on a long-term basis along Balkanstream. These bookings might not be available for the market or not on a firm yearly basis in 2028. Therefore, we assumed that trade is restricted to 10% of the technical capacity of this pipeline. (BG-RS and RS-HU)
- Gazprom owns 51% of the Banatski Dvor storage facility in Serbia. We assume that Gazprom will not provide access to third parties to use the storage facility. Therefore, we assume that only 49% of the capacities can be used in the REPowerEU scenarios.
- Despite regional coordination efforts the Trans Balkan route does not offer firm yearly competitive capacity products along the route. We assumed that the cost of use of Transbalkan route is 8 EUR/MWh (BG-ROTB RO-MDTB, MD-UATB sections)

Data used for the CPs, as provided by EnC Secretariat

Russian gas contracts (ACQ) 2025	
	TWh/year
RU-BA	1,8
RU-MD	0,0
RU-MK	3,0
RU-RS	21,1
RU-UA	0,0

Natural gas production. 2028	
	TWh/y
BA	0
MD	0
MK	0
RS	3,04
UA	188,14

	Annual gas demand, TWh/yr
BA	2,2
MD	19,5
MK	3,7
RS	34,0
UA	185,9

Cross-border capacities, 2028						
Pipeline	From market	To market	Technical capacity	Maximum trade	Transmission fee	
			GWh/d	GWh/d	€/MWh	€/MWh
MD-RO	MD	RO	22	22	1.17	1.10
MD-UATB	MD	UA	121	121	2.05	1.11
MD-ROTB	MD	RO	380	380	2.05	1.10
RO-MD	RO	MD	65	65	0.89	1.77
UA-MD	UA	MD	52	52	1.17	1.36
RO-MDTB	RO	MD	121	121	1.31	2.05
UA-MDTB	UA	MD	380	380	1.11	2.05
BG-MK	BG	MK	32	32	0.58	0.00
GR-MK	GR	MK	40	40	0.59	0.00
MK-GR	MK	GR	40	40	0.00	0.48
BG-RS	BG	RS	460	46	0.76	0.68
HU-RS	HU	RS	142	142	0.45	0.43
RO-RS	RO	RS	0	0	0.89	0.31
RS-BA	RS	BA	14	14	0.43	0.18
RS-BG	RS	BG	350	350	0.33	0.52
RS-HR	RS	HR	0	0	0.00	0.00
RS-HU	RS	HU	246	25	0.78	0.37
RS-RO	RS	RO	0	0	1.10	0.00
BY-UA	BY	UA	956	0	0.50	1.40
HU-UA	HU	UA	207	207	0.45	1.00
PL-UA	PL	UA	136	136	0.83	1.00
RU-UA	RU	UA	7620	0	0.50	1.40
SK-UA	SK	UA	287	287	1.03	1.00
UA-HU	UA	HU	517	517	1.53	0.37
UA-PL	UA	PL	136	136	1.42	1.69
UA-SK	UA	SK	2064	2064	1.52	1.03

GAS MARKET MODELLING

- Modelling year 2028
  (the first year of having the Roadmap in place)
- Scenarios:
  - **With Russian gas** (counterfactual): as if REPowerEU were not in place and pipeline deliveries via Turk Stream to HU, SK and GR would continue, + RU LNG is allowed
  - **REPowerEU is banning Russian gas in EU MSs**
  - **REPowerEU Roadmap extended**: the Russian gas is banned in the EU and in the Energy Community CPs (except for Georgia)
- Baseline: Reference demand (as of 2024), Japanese price at 40 EUR/MWh
  - Storage start-end 30%; storage target 80%;
  - LNG regasification terminal capacity limit 80%*

SENSITIVITIES

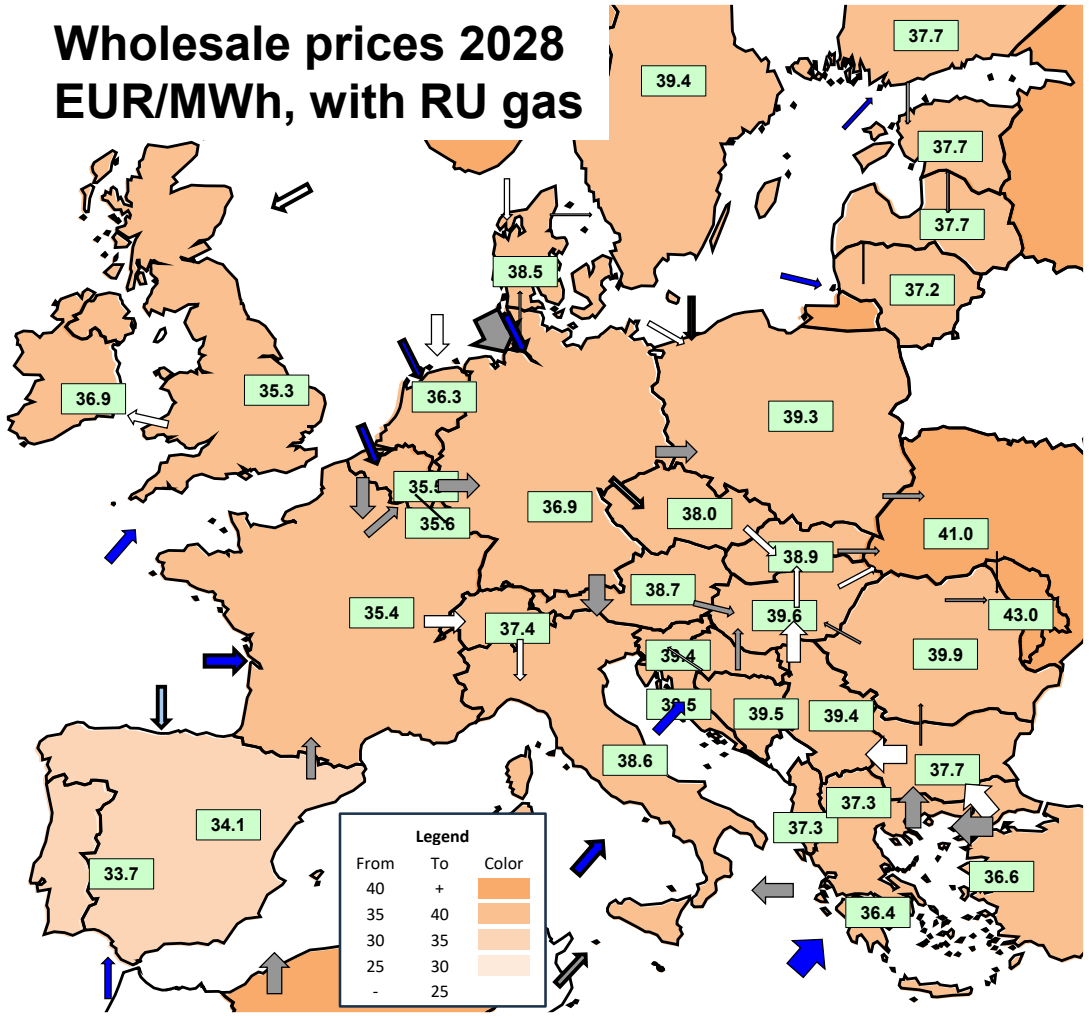
- **Testing a larger storage need (gap between starting and end of gas year storage level is 10% and 20% higher)**
- **Assuming that UA needs more gas import: (reference 70 TWh/h) testing for 110 TWh/yr and 140 TWh/yr**
- **Due to the damage in Middle East gas infrastructure, if the scarcity on the LNG market remains global LNG price environment might stay at a higher level: testing the results with JKM prices at 60 and 70 EUR/MWh.**

** % (we capped the technical capacity of LNG regas terminals of the EU by 80% of their capacity, as this was the highest historical utilization during the energy crisis). This is a conservative assumption.*

RESULTS (JKM = 40 EUR/MWH)

JKM=40 EUR/MWh

Baseline 2028 with Russian gas



- Russian gas is already minor in the mix of the EU27
- LNG terminals utilization is already high, main source of LNG is US
- Wholesale gas prices in EU markets vary:
  - Iberian Peninsula: abundant LNG, but limited connection to the EU gas markets (~34/MWh)
  - NW Europe 35-37 EUR/MWh
  - Central Europe 39-40 EUR/MWh
  - RS, BA 39.5 EUR/MWh
  - MK 37 EUR/MWh
  - UA, MD 41-43 EUR/MWh

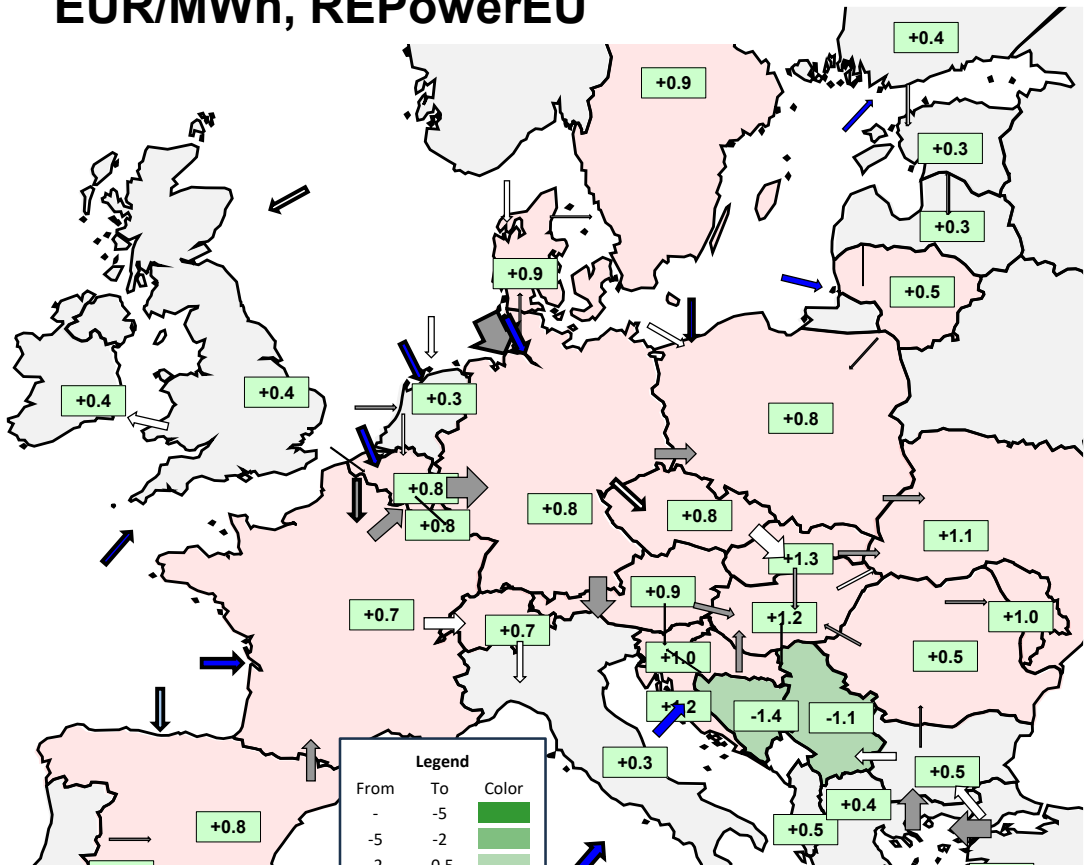
JKM=40 EUR/MWh

Scenarios

Technical code	Year	Repower	JP	EU demand	LNG regas availability	storage start	storage end	UA import need
0b	2028	no Repower	40	REF	80%	30%	30%	70 TWh
1b	2028	REPOWER	40	REF	80%	30%	30%	70 TWh
3	2028	REPOWER + EnC	40	REF	80%	30%	30%	70 TWh
40	2028	REPOWER	40	REF	80%	30%	30%	110 TWh
42	2028	REPOWER + EnC	40	REF	80%	30%	30%	110 TWh
41	2028	REPOWER	40	REF	80%	30%	30%	140 TWh
43	2028	REPOWER + EnC	40	REF	80%	30%	30%	140 TWh

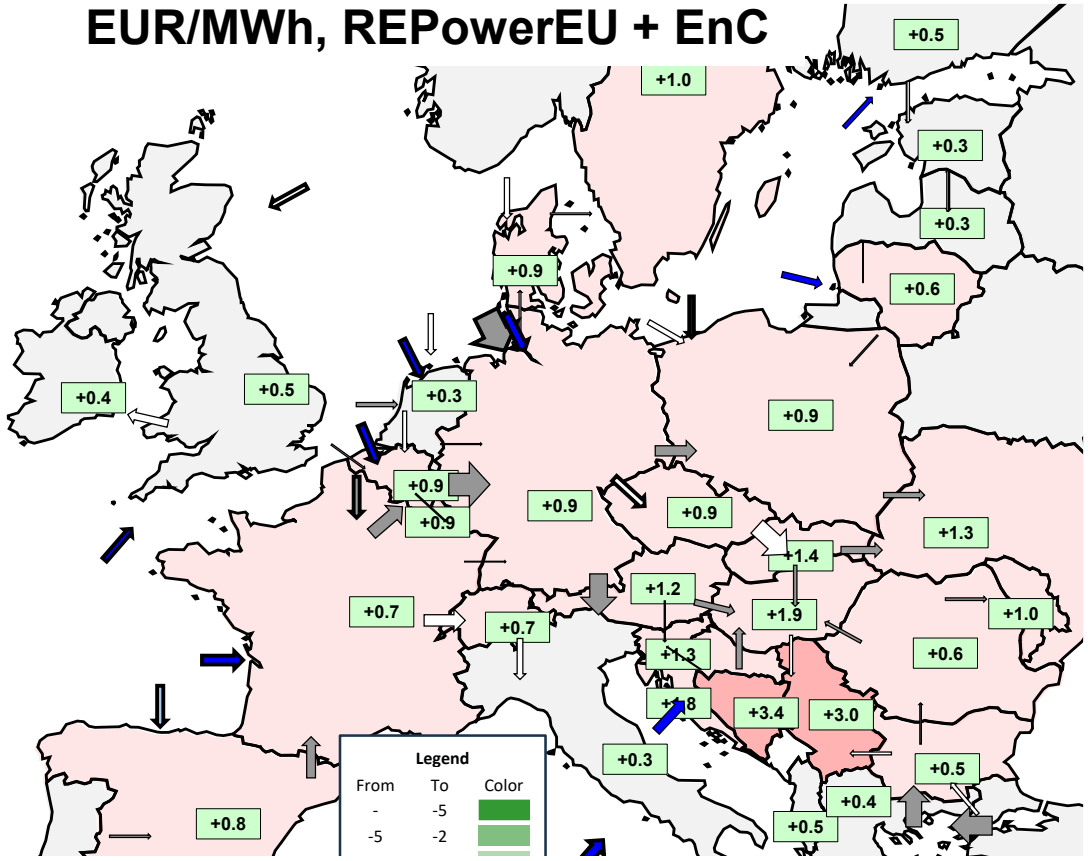
REPowerEU Roadmap effects, EUR/MWh

Wholesale price increase 2028 EUR/MWh, REPowerEU



- Implementing a Russian gas ban from 2028 in the EU27 would results in a 0.3-1.3 EUR/MWh price increase, with HU, SK and HR, SI being on the higher end.
- Some contracting parties with existing Russian contracts would benefit from additional trade opportunities and see a -1.1- 1.4 EUR/MWh price decrease (RS and BA) provided that they can prove that the volumes traded are of non-Russian origin.

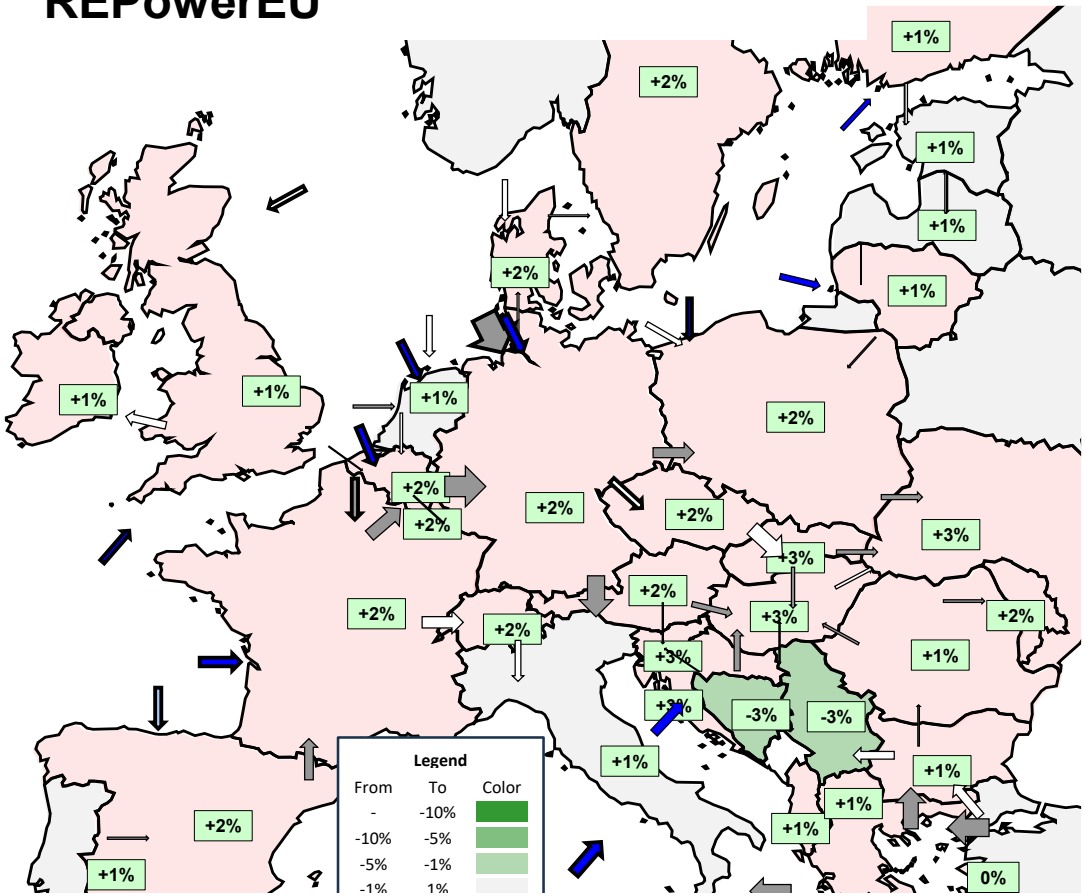
Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC



- Implementing a Russian gas ban from 2028 in the EU27 + CPs would results in a 0.3-1.9 EUR/MWh price increase in EU MSs, with CEE forming a higher priced zone.
- Contracting parties loosing Russian contracts would see the highest 3-3.5 EUR/MWh price increase (RS and BA). MK is moving with Greece, while UA and MD follow the CEE gas price trends.

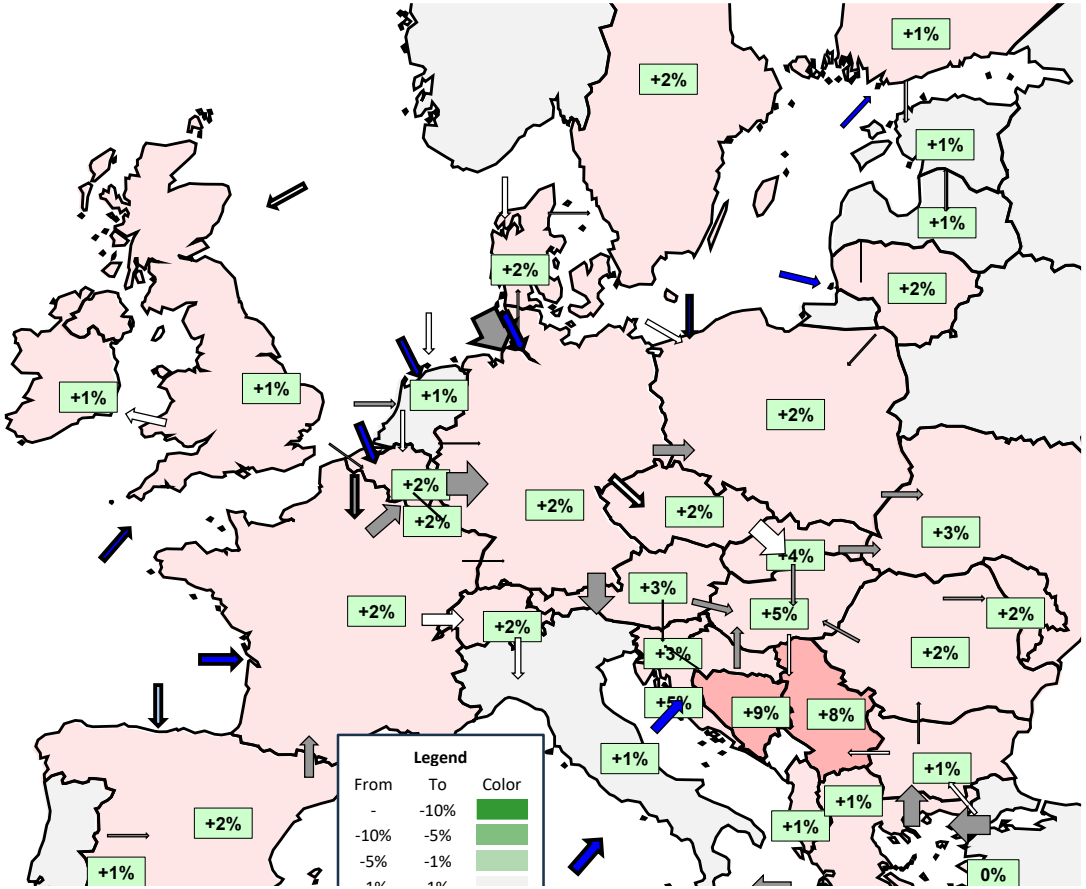
REPowerEU Roadmap effects, %

Wholesale price increase 2028 %, REPowerEU



- Implementing a Russian gas ban from 2028 in the EU27 would results in a **+1-3 %** price increase, with HU, SK and HR, SI being on the higher end.
- Some contracting parties with existing Russian contracts would benefit from additional trade opportunities and see a -3% price decrease (RS and BA) provided that they can prove that the volumes traded are of non-Russian origin.

Wholesale price increase 2028%, REPowerEU + EnC

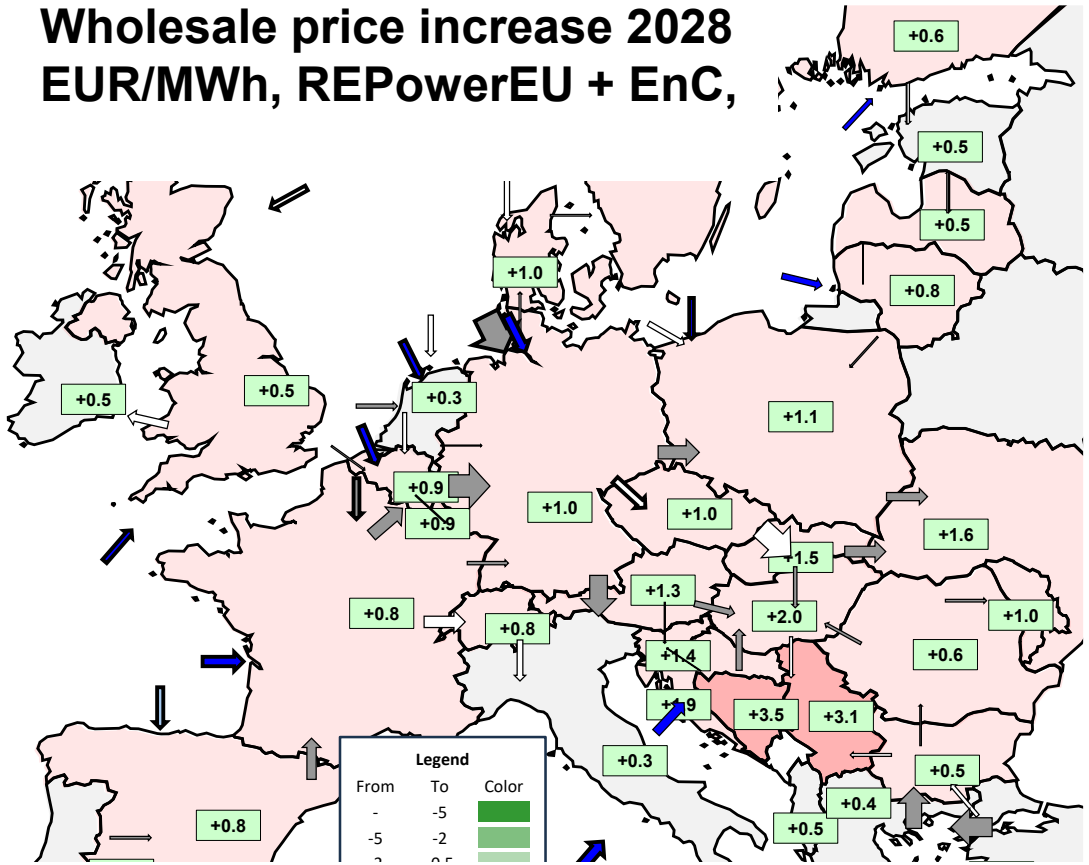


- Implementing a Russian gas ban from 2028 in the EU27 + CPs would results in a **+1-5%** price increase in EU MSs, with CEE forming a higher priced zone.
- Contracting parties loosing Russian contracts would see the **+8-9%** price increase (RS and BA). MK (+1%) is moving with Greece, while UA **(+3%)** and MD **(+2%)** follow the CEE gas price trends.

Effects of REPowerEU in EnC CPs and more import need of Ukraine

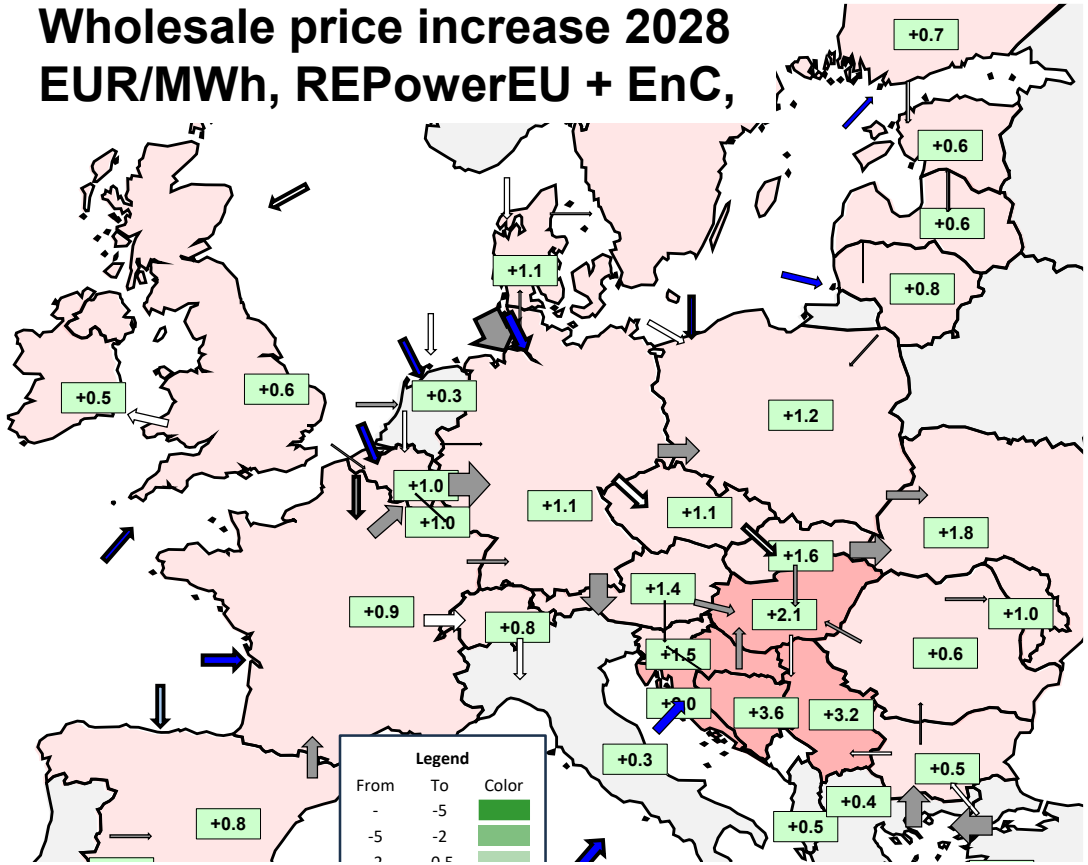
110 TWh UA import need

Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC,



140 TWh UA import need

Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC,

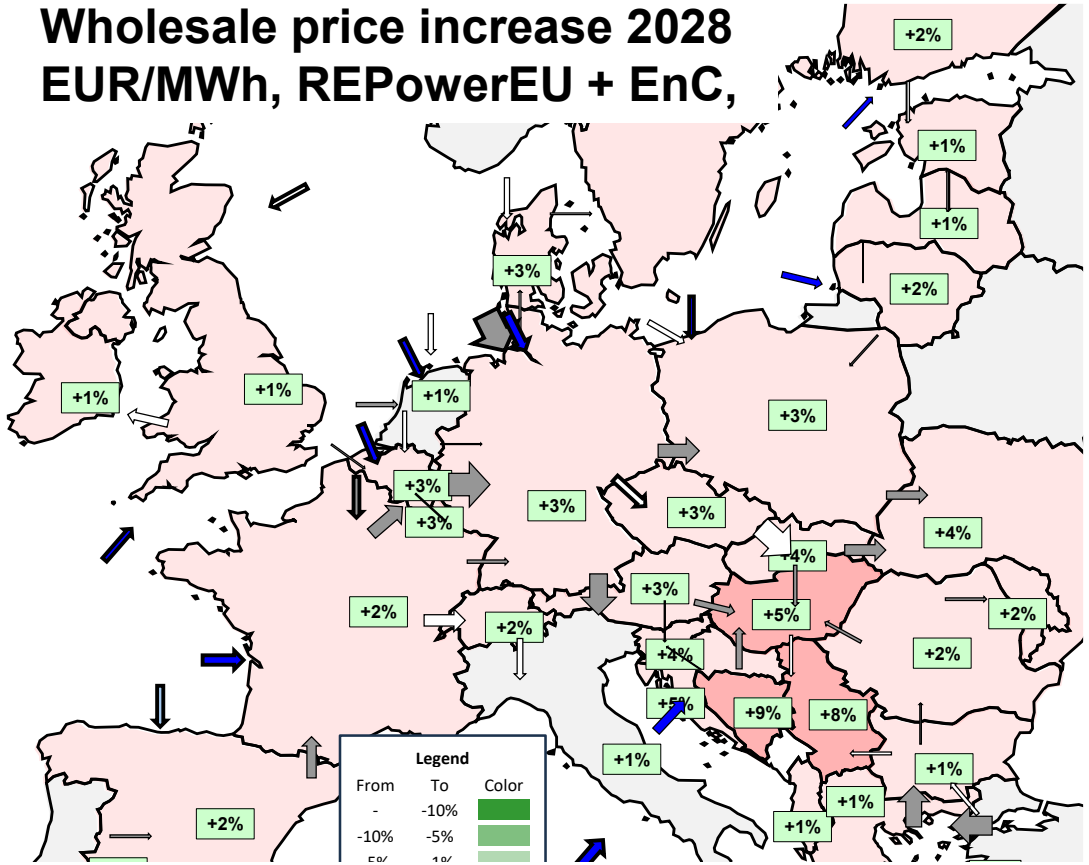


- Ukrainian import need was tested at 70, 110 and 140 TWh/yr
- Results on the map visualize the change compared to the 70 TWh UA import need scenario.
- Additional 40 TWh/ yr UA import need added 0.3 EUR/MWh price effect of introducing REPowerEU for the EnC. Additional 70 TWh/yr would add 0.5 EUR/MWh to the UA wholesale gas price.
- Regional effect spreading to HU, SK and PL, that provide the routes for the additional volumes.

Effects of REPowerEU in EnC CPs and more import need of Ukraine

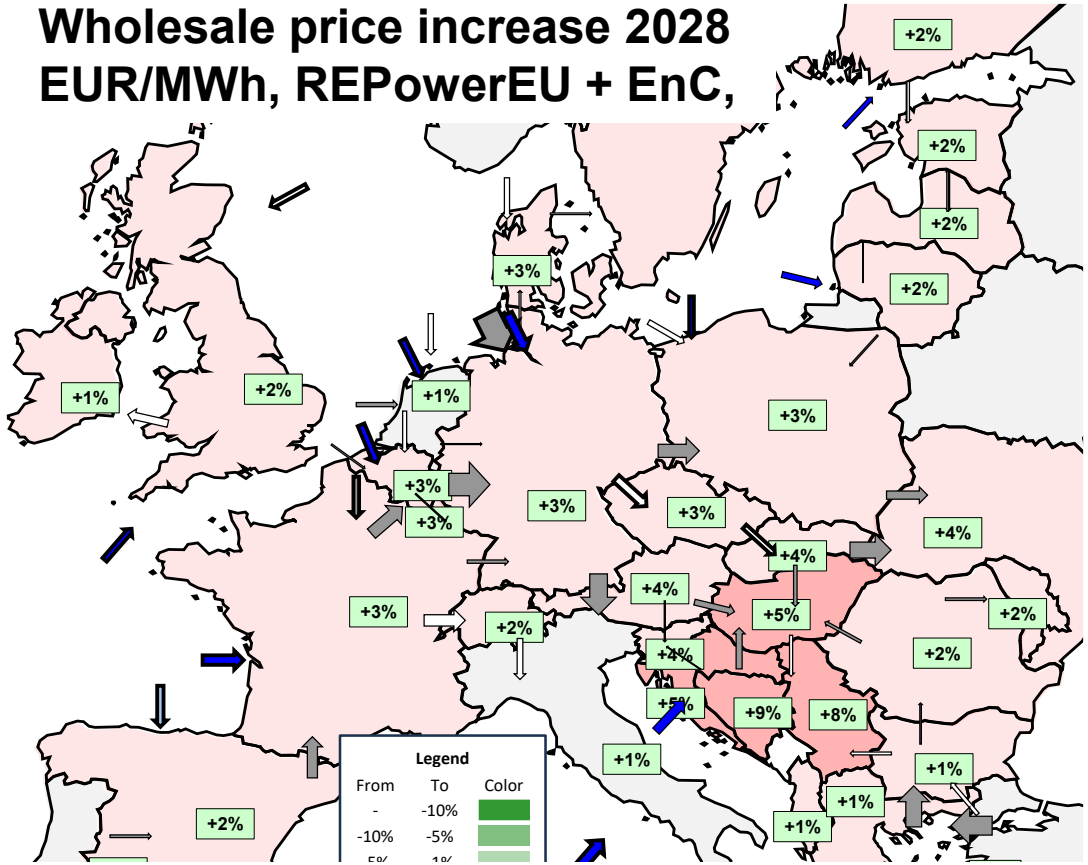
110 TWh UA import need

Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC,



140 TWh UA import need

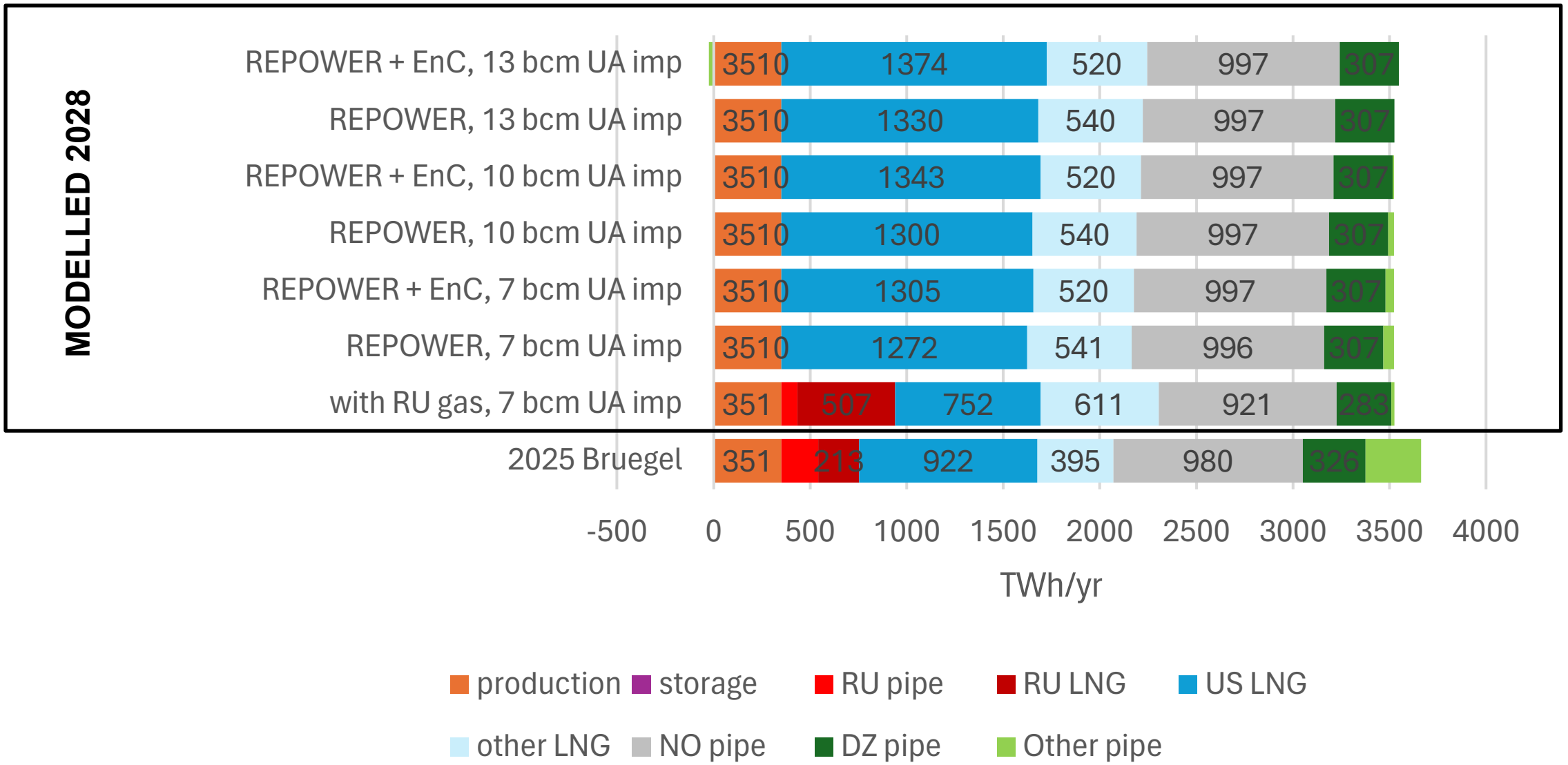
Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC,



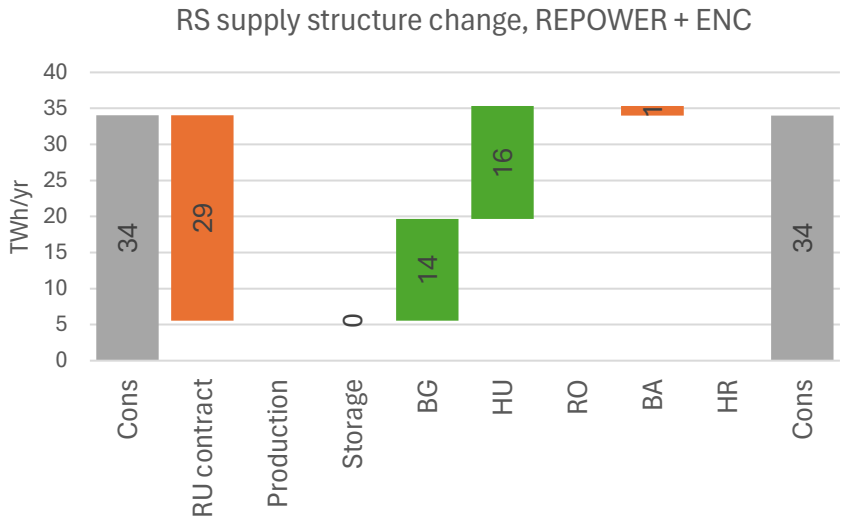
- Ukrainian import need was tested at 70 (baseline), 110 and 140 TWh/yr
- Results on the map visualize the change compared to the 70 TWh UA import need.
- Additional 40-70 TWh/ yr UA import need added +1% price effect of introducing REPowerEU for the EnC.
- Regional effect spreading to HU, SK and PL, that provide the routes for the additional volumes.

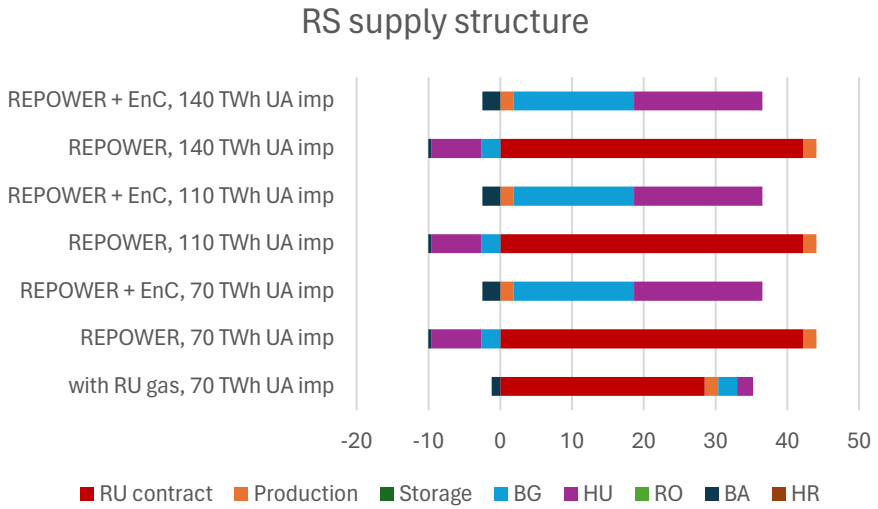
JKM=40 EUR/MWh

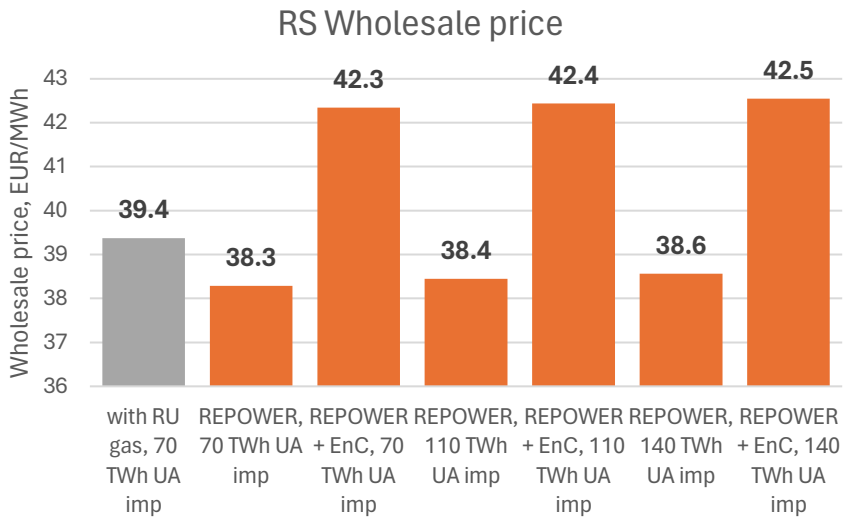
EU27 supply structure modelled 2028

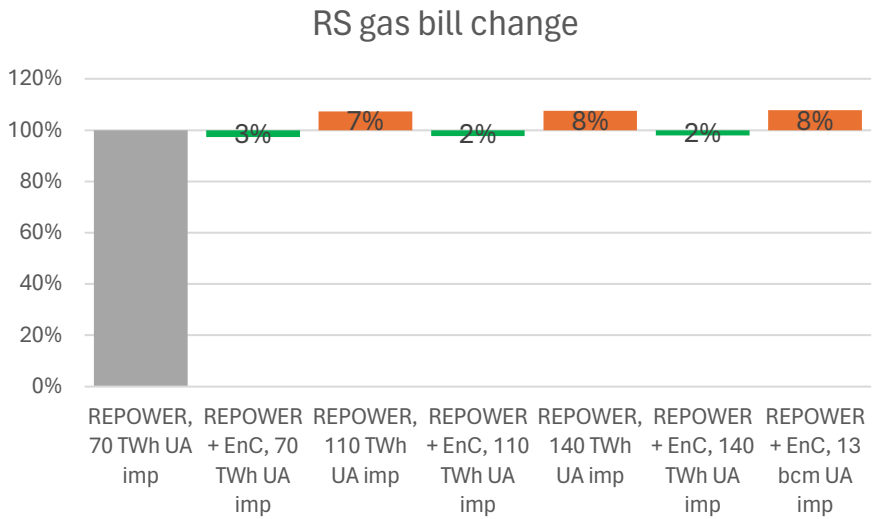


RS results





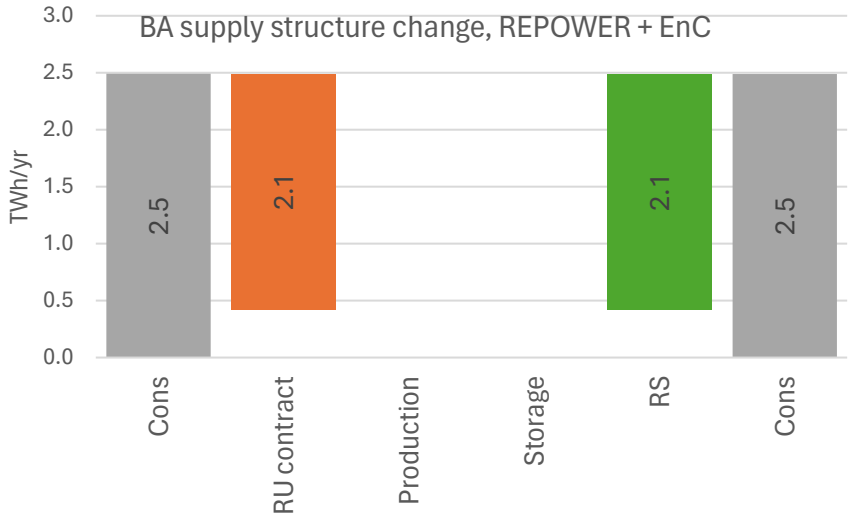


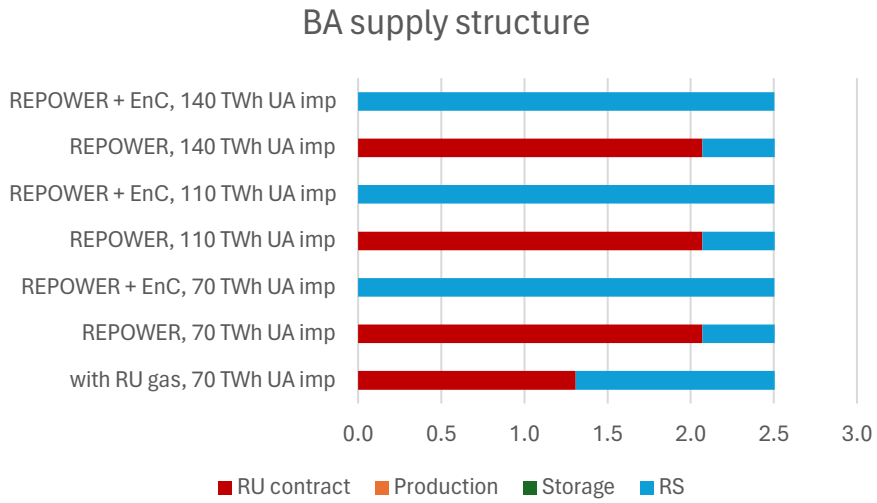


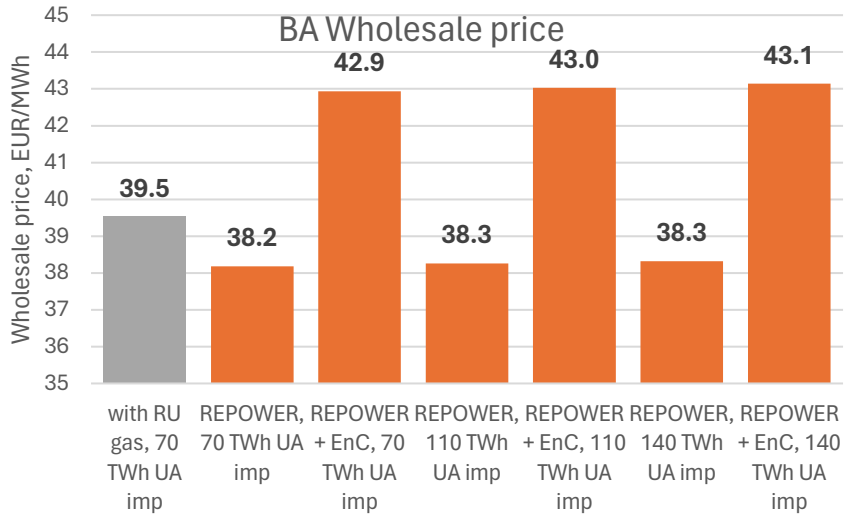
Supply structure change to REPower + EnC and 140 TWh UA import need

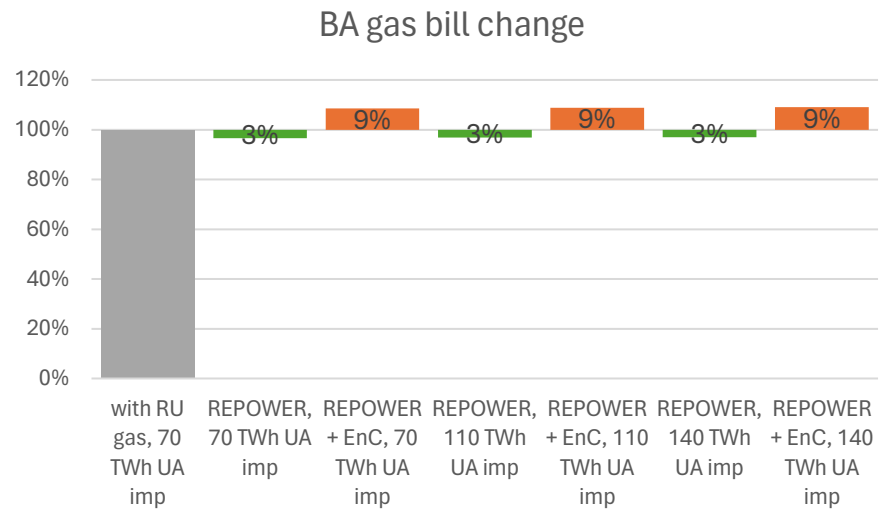
JKM=40 EUR/MWh

BA results





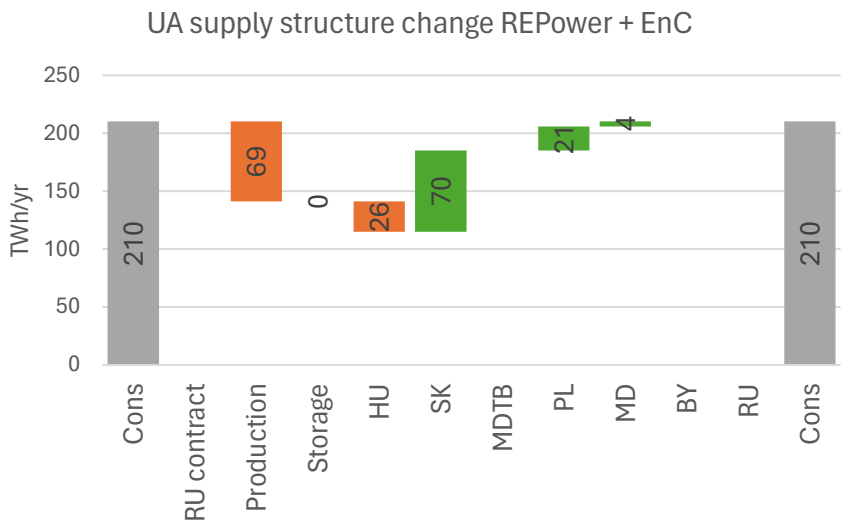


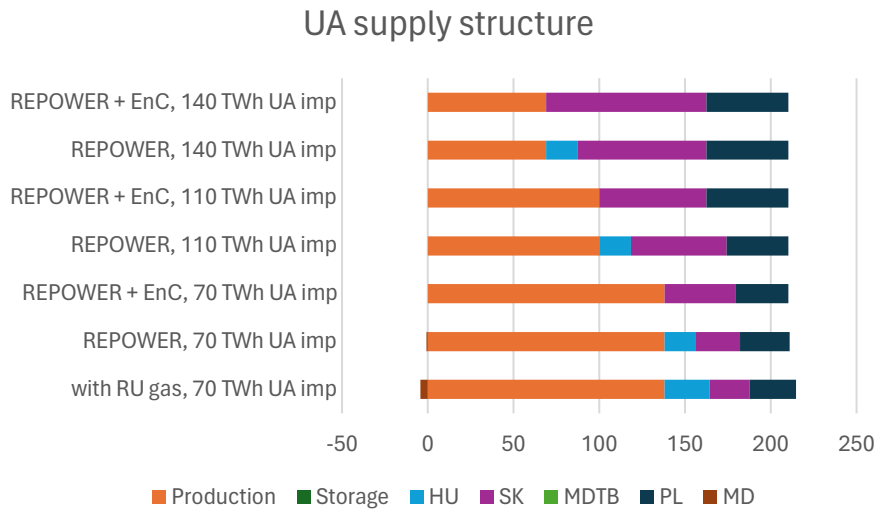


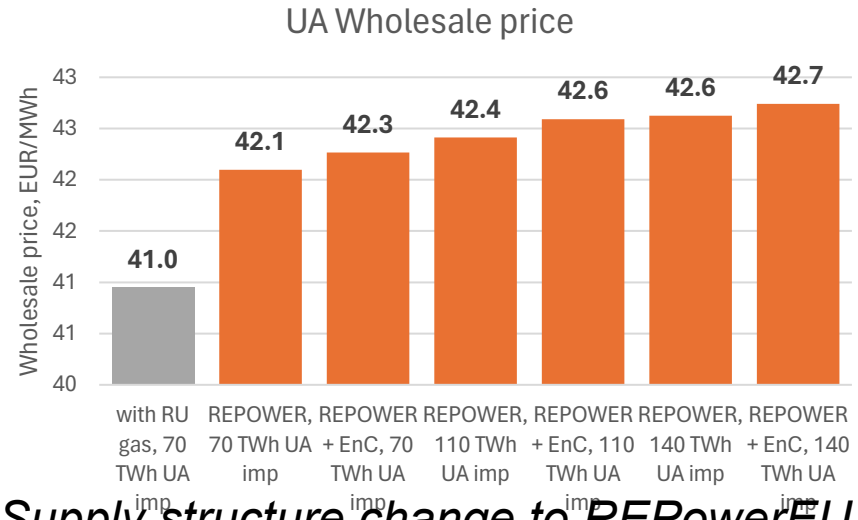
Supply structure change to Repower + EnC and 140 TWh bcm UA import need

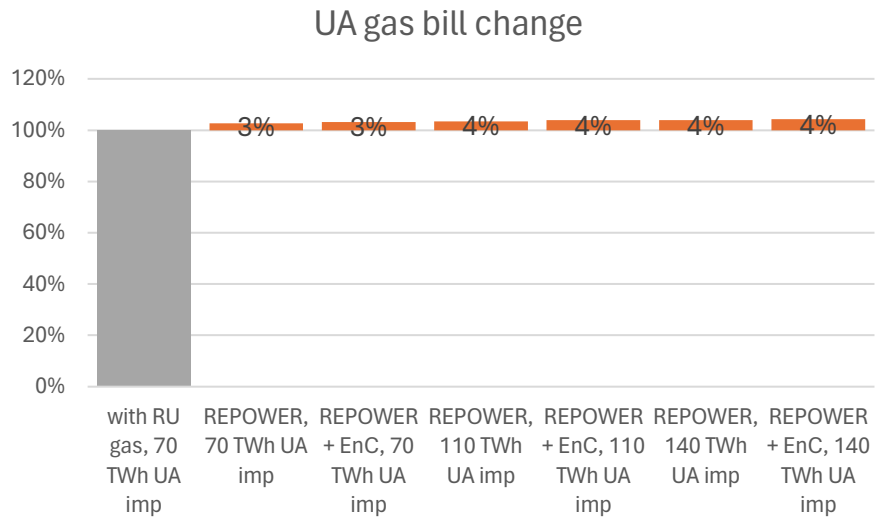
JKM=40 EUR/MWh

UA results





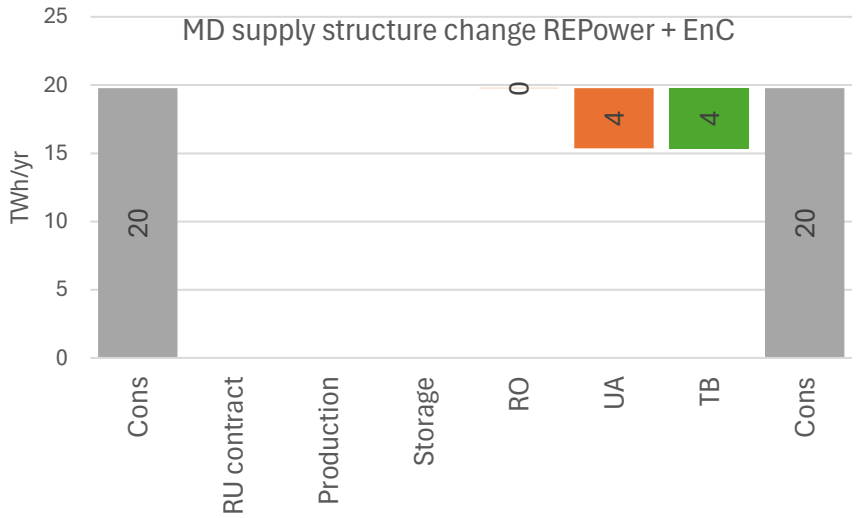


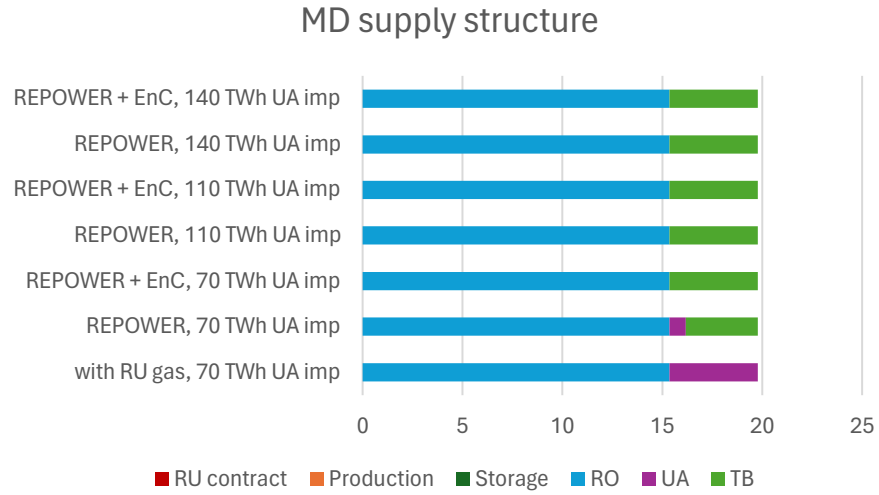


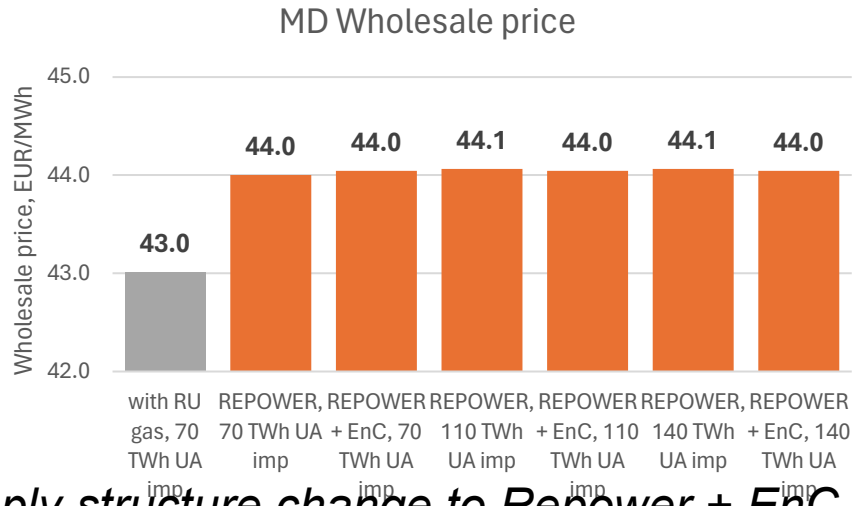
Supply structure change to REPowerEU + EnC and 140 TWh UA import need

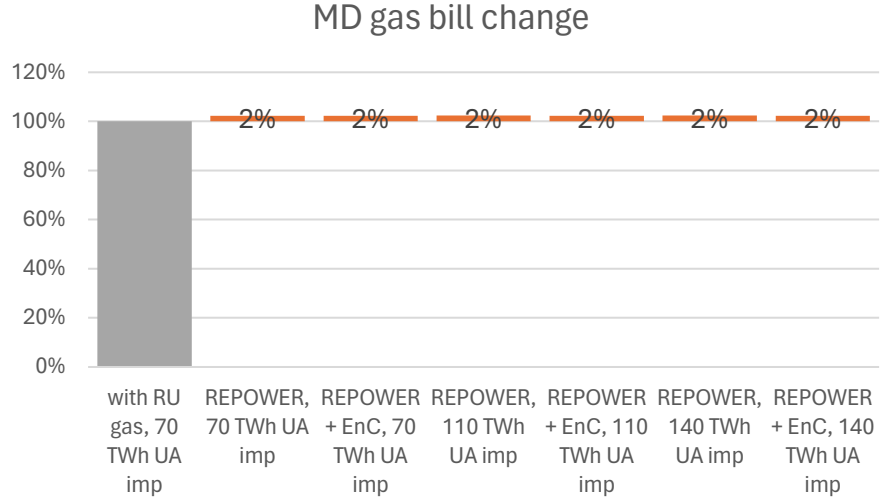
JKM=40 EUR/MWh

MD results





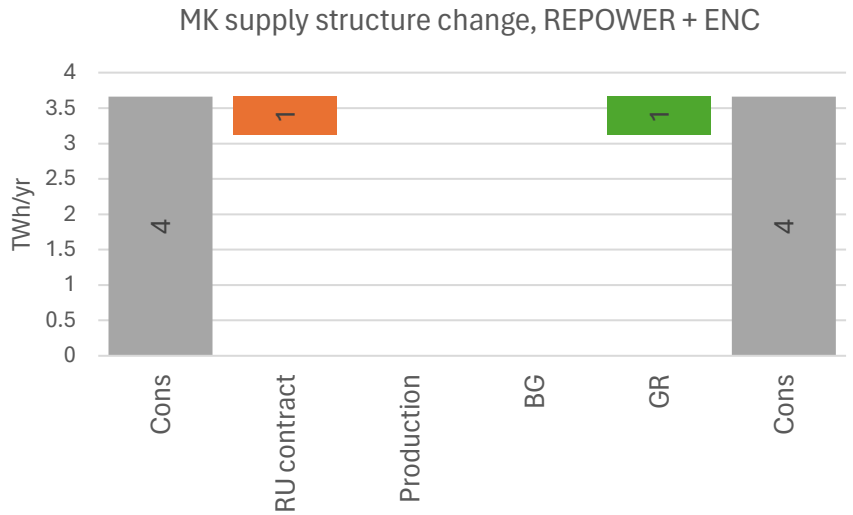


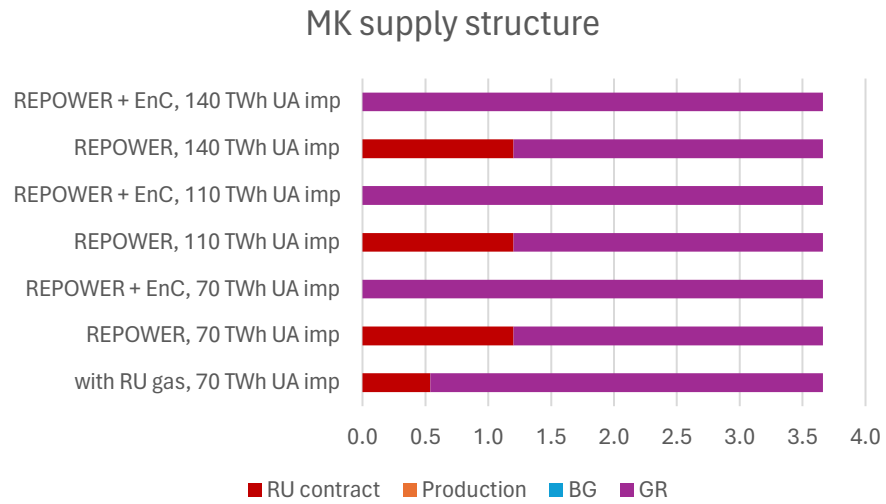


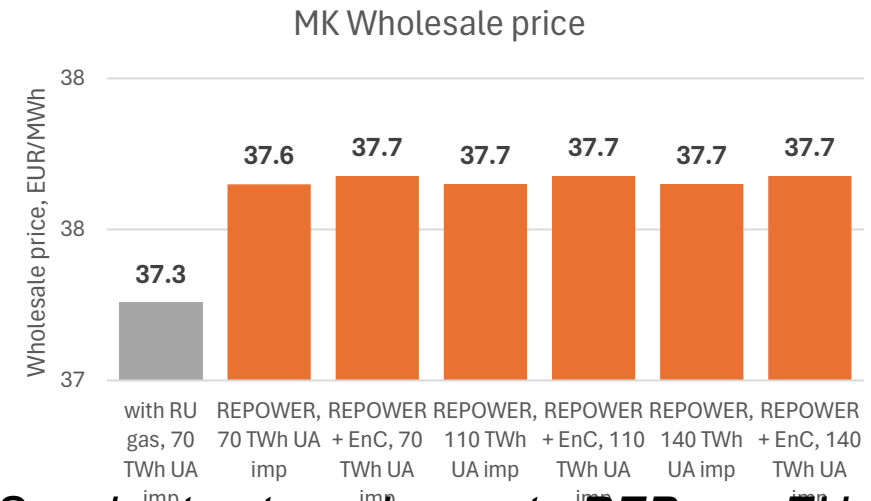
Supply structure change to Repower + EnC and 140 TWh UA import need

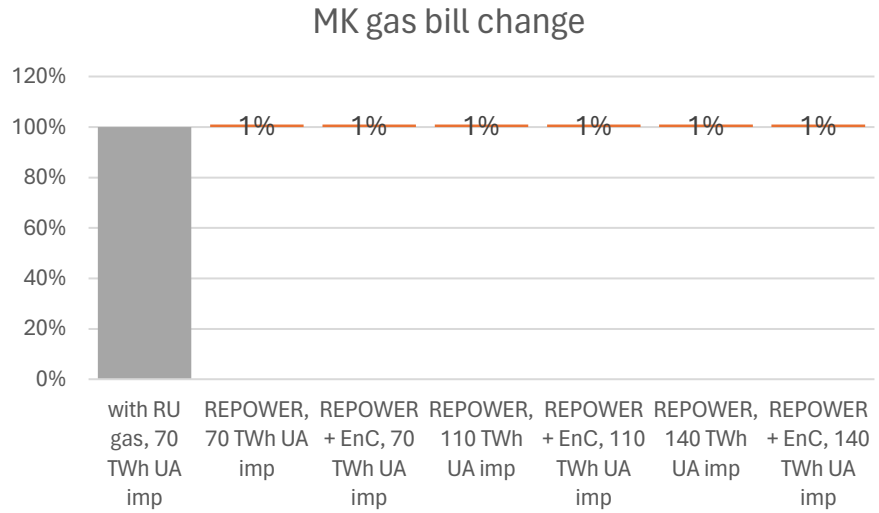
JKM=40 EUR/MWh

MK results









Supply structure change to REPowerEU + EnC and 140 TWh UA import need

Sensitivity results

- Higher storage need sensitivities (keep 40/50/60% in storage by end of withdrawal season for security of supply) > Resulted in a further 1-2% price increase on top of the balanced (30% starting stock -30% end of season stock) scenario.
- Lower LNG regasification availability (60%), that is also a good proxy for limited global supply test runs > resulted in a 1-2% price increase on top of the scenarios.
- **Combination of these two extremes (60% LNG available, 60% need to be kept in storage) resulted in price hike from 40-45 EUR/MWh to over 100 EUR/MWh, that is a more than 100% increase.**
- **Results are robust also in a higher global price environment (JP: 60-70 EUR/MWh). The price change due to the REPOWEREU Roadmap implementation in CPs have a 1-3% price increasing impact in the EU MS, UA, MD and MK. On the other hand, RS and BA price increase is in the range of 8-12 % depending on UA import need.**

THANK YOU FOR YOUR ATTENTION

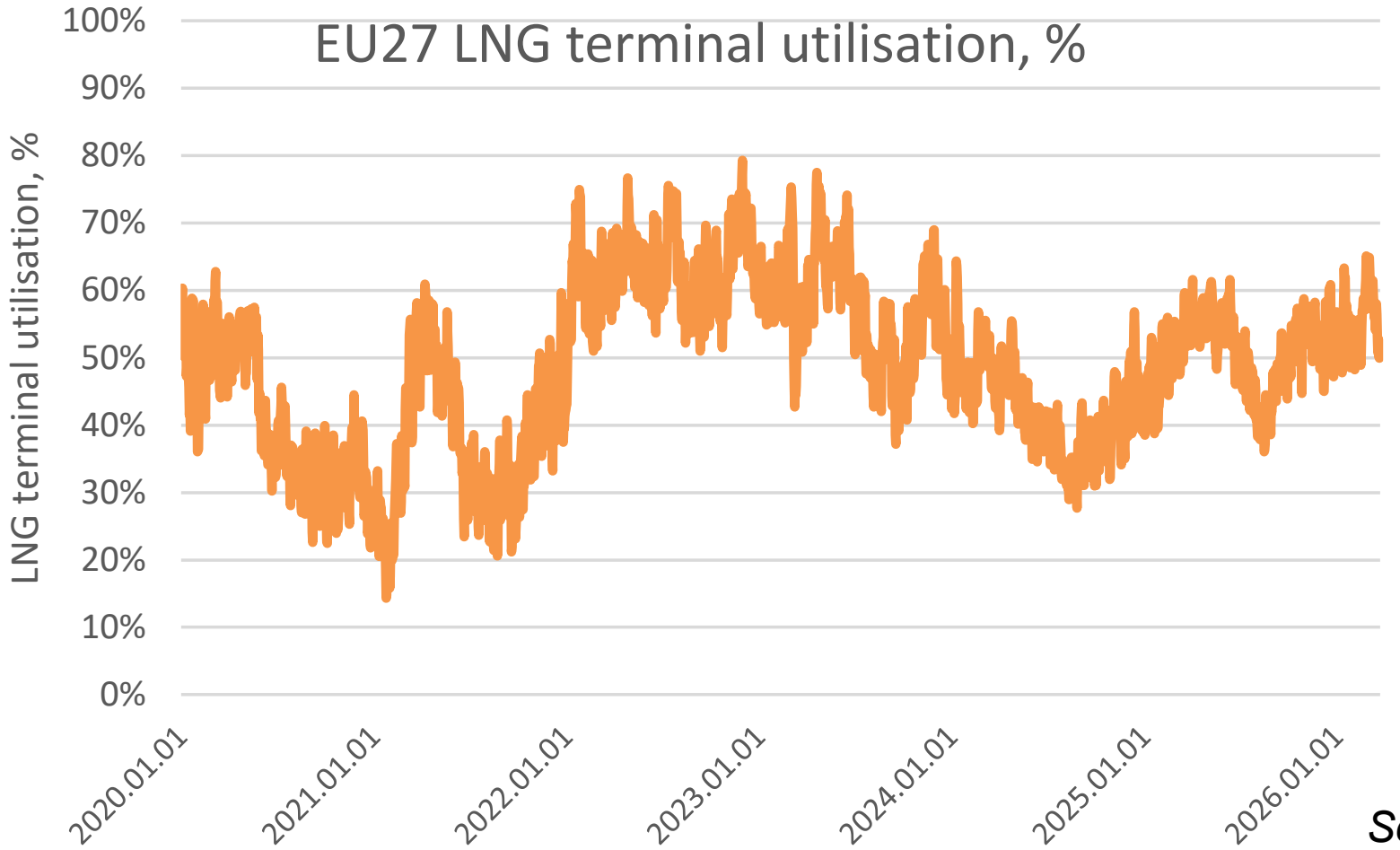
Contact:
Péter Kotek peter.kotek@rekk.hu
Borbála Takácsné Tóth borbala.toth@rekk.hu

ANNEXES

Abbreviations

BA	Bosnia and Herzegovina
BG	Bulgaria
CP	Contracting Party
DZ	Algeria
EnC	Energy Community
GR	Greece
HR	Croatia
HU	Hungary
JKM	Japan Korea Marker
LNG	Liquefied natural gas
MD	Moldova
MK	North Macedonia
NO	Norway
PL	Poland
RO	Romania
RS	Serbia
RU	Russia
SK	Slovakia
UA	Ukraine
US	United States

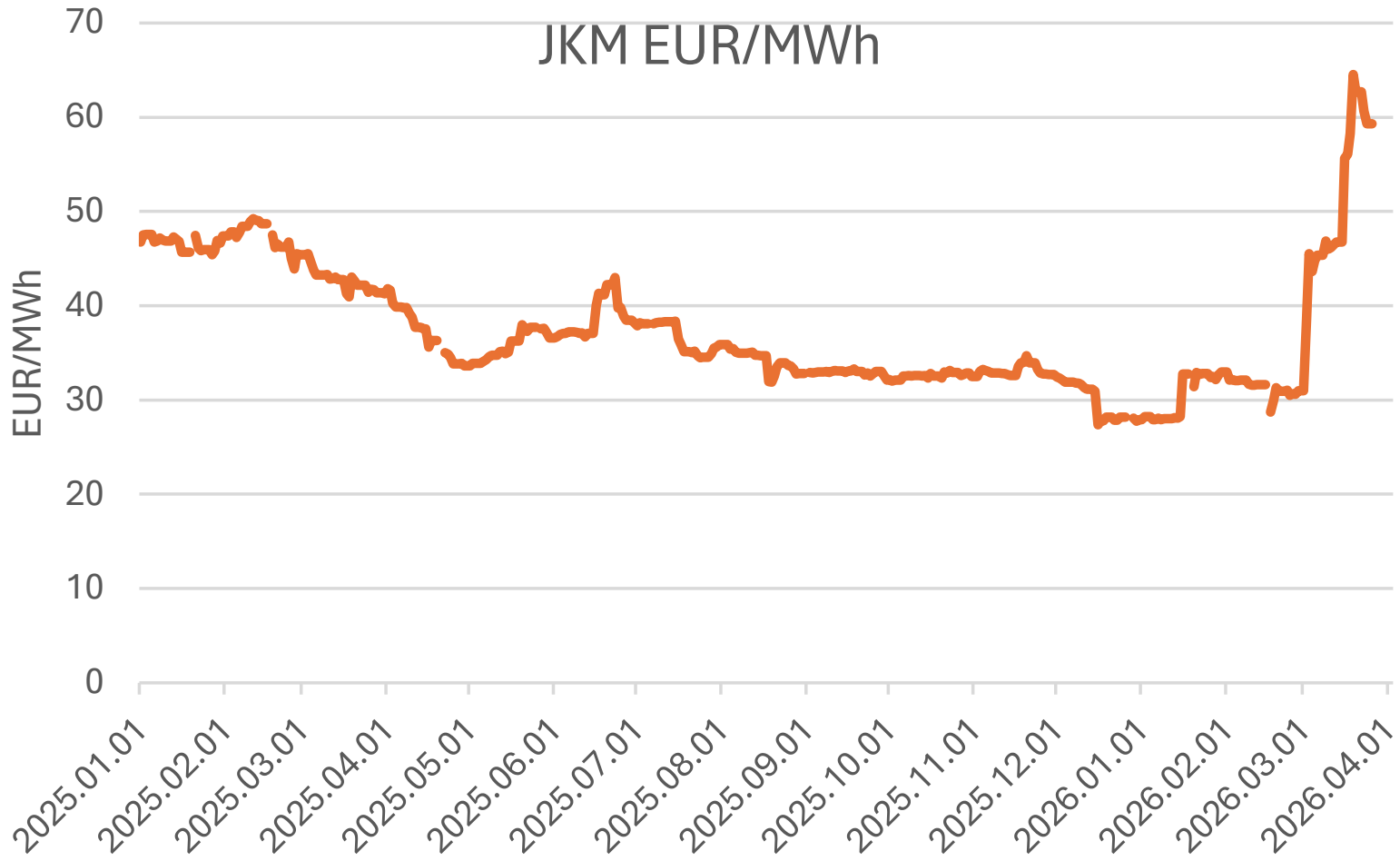
Terminal utilisation capped at 80% of technical capacity



Source: ALSI

- Although some LNG terminals may run at 100% utilisation for a brief time, overall utilisation of EU LNG terminals have not exceeded 80%
- For a conservative approach, we capped the technical capacities of LNG regasification terminals at 80%

Assumptions on global LNG price

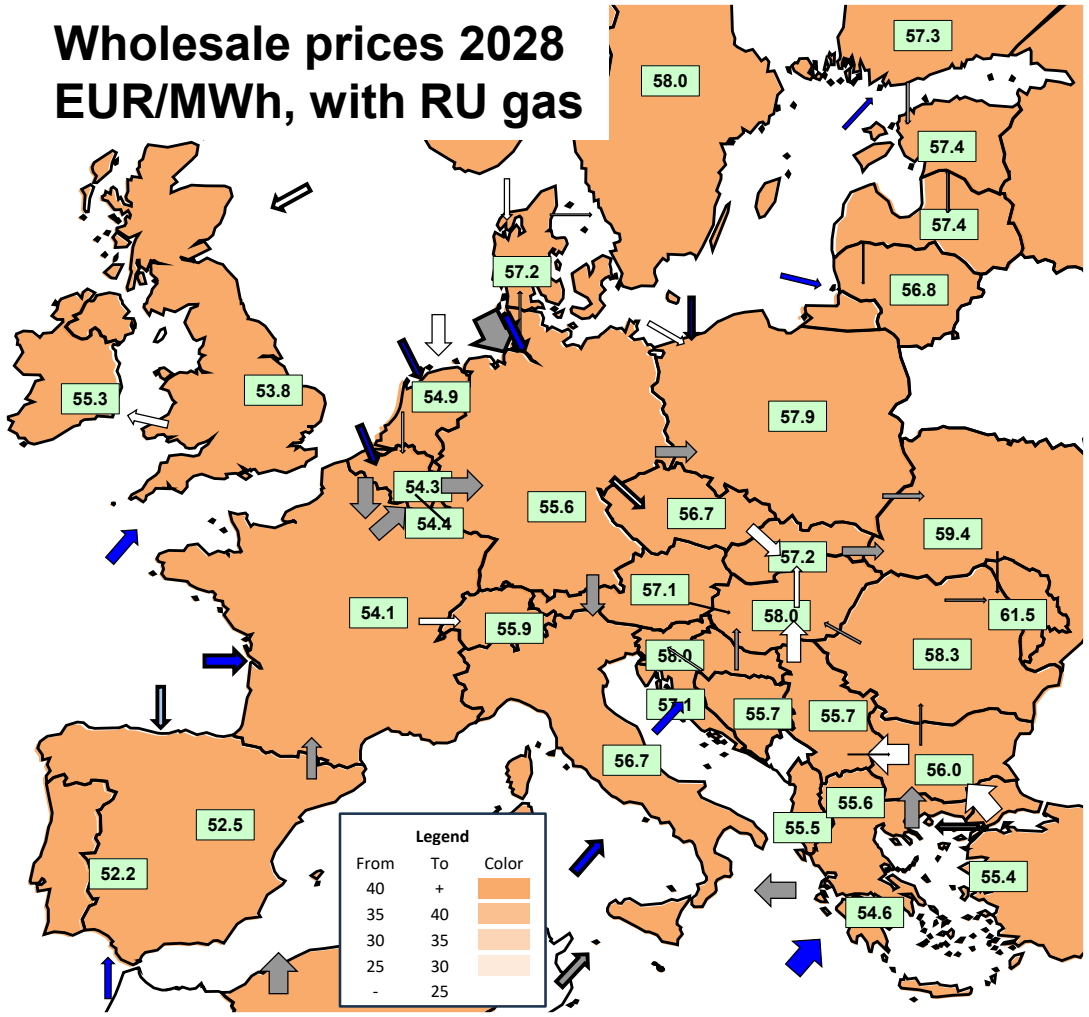


Source: REKK based on investing.com

- JKM marker in 30-40 EUR/MWh range for 2025
- War in Iran and Hormuz crisis caused a price hike to above 60 EUR/MWh (~20 USD/mmbtu)
- Base scenario: 40 EUR/MWh (expecting the crisis to end by 2028)
- Sensitivity scenarios: 60 EUR/MWh and 70 EUR/MWh prolonged crisis / deeper crisis

JKM=60 EUR/MWH

Baseline 2028 with Russian gas (JKM=60 EUR/MWh)



- Russian gas is already minor in the mix of the EU27 (~50 bcm LNG and 10 bcm pipeline gas via TS)
- LNG terminals utilization is already high, main source of LNG is US
- Wholesale gas prices in EU markets vary:
  - Iberian Peninsula: abundant LNG, but limited connection to the EU gas markets (~52/MWh)
  - NW Europe 54-55 EUR/MWh
  - Central Europe 57-58 EUR/MWh
  - RS, BA: 56 EUR/MWh
  - MK: 56 EUR/MWh
  - UA, MD: 59-61 EUR/MWh

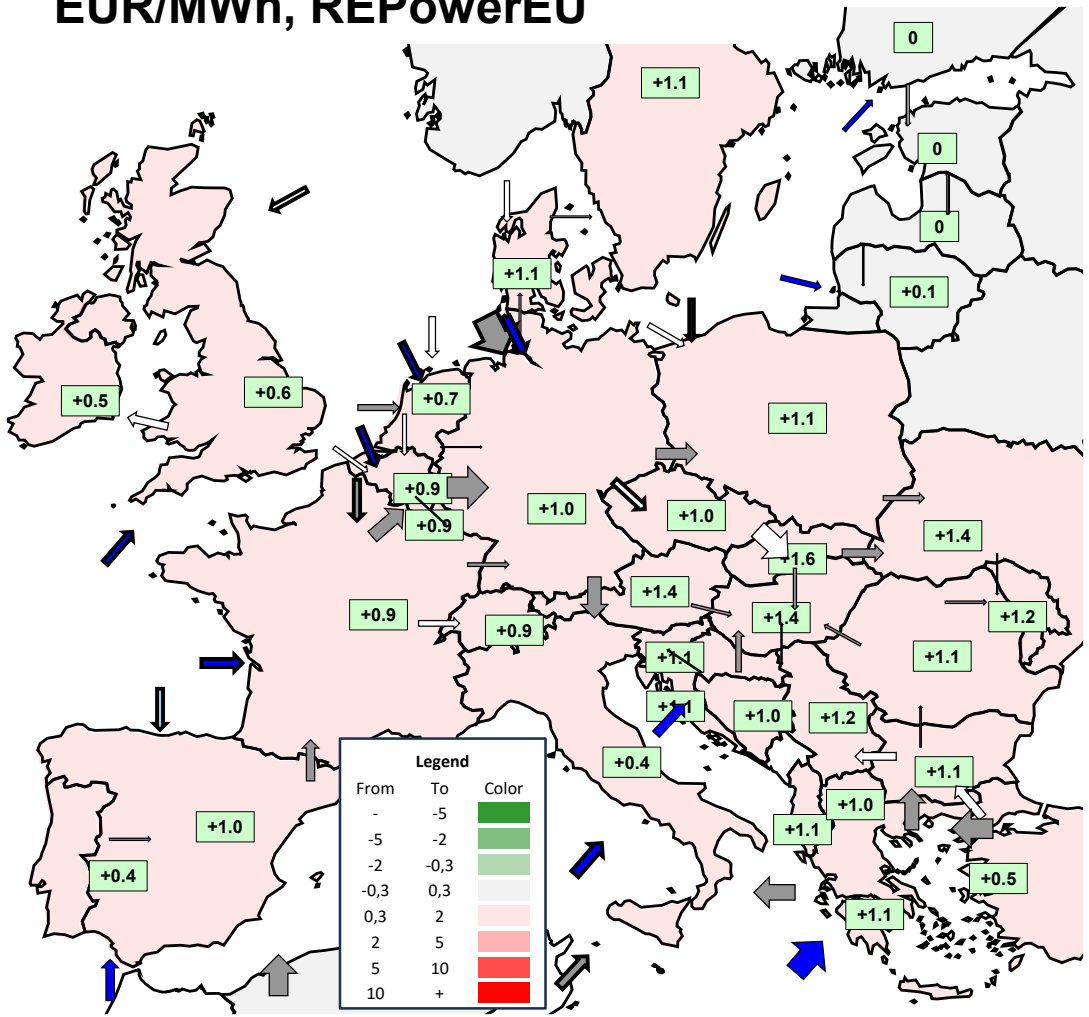
JKM=60 EUR/MWh

Scenarios

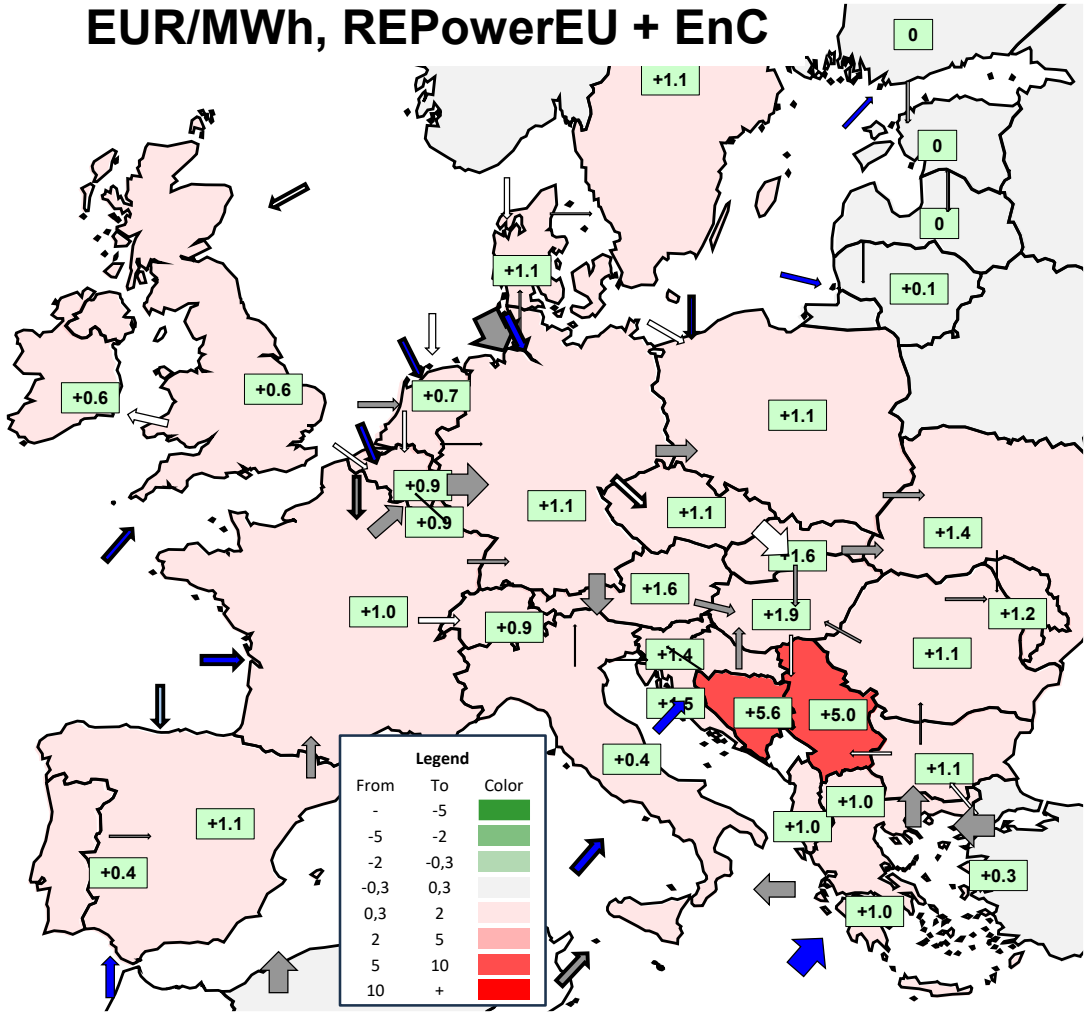
	Year	Repower	JP	EU demand	LNG regas availability	storage start	storage end	UA import need
78	2028	no Repower	60	REF	80%	30%	30%	70 TWh
81	2028	REPOWER	60	REF	80%	30%	30%	70 TWh
84	2028	REPOWER + EnC	60	REF	80%	30%	30%	70 TWh
90	2028	REPOWER	60	REF	80%	30%	30%	110 TWh
93	2028	REPOWER + EnC	60	REF	80%	30%	30%	110 TWh
99	2028	REPOWER	60	REF	80%	30%	30%	140 TWh
102	2028	REPOWER + EnC	60	REF	80%	30%	30%	140 TWh

REPowerEU Roadmap effects, EUR/MWh

Wholesale price increase 2028 EUR/MWh, REPowerEU



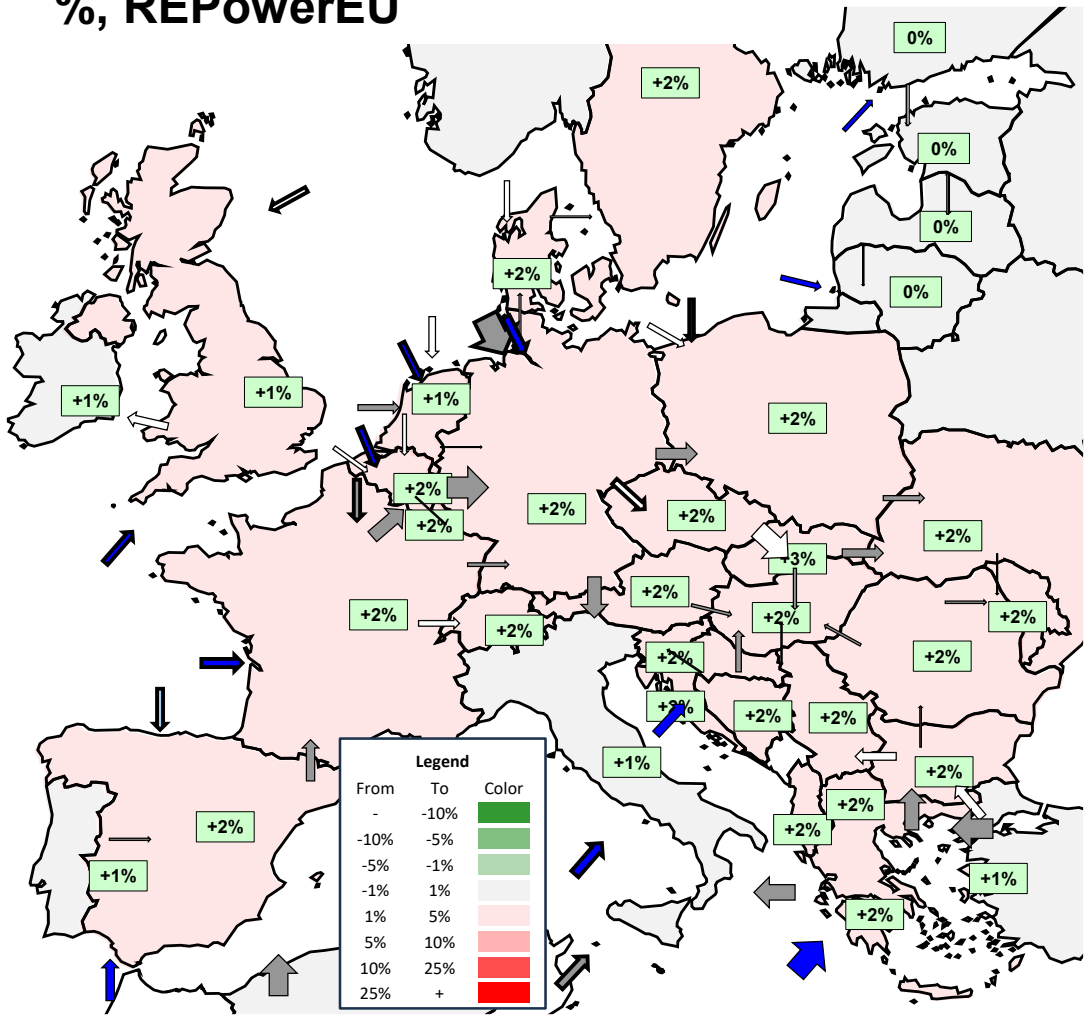
Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC



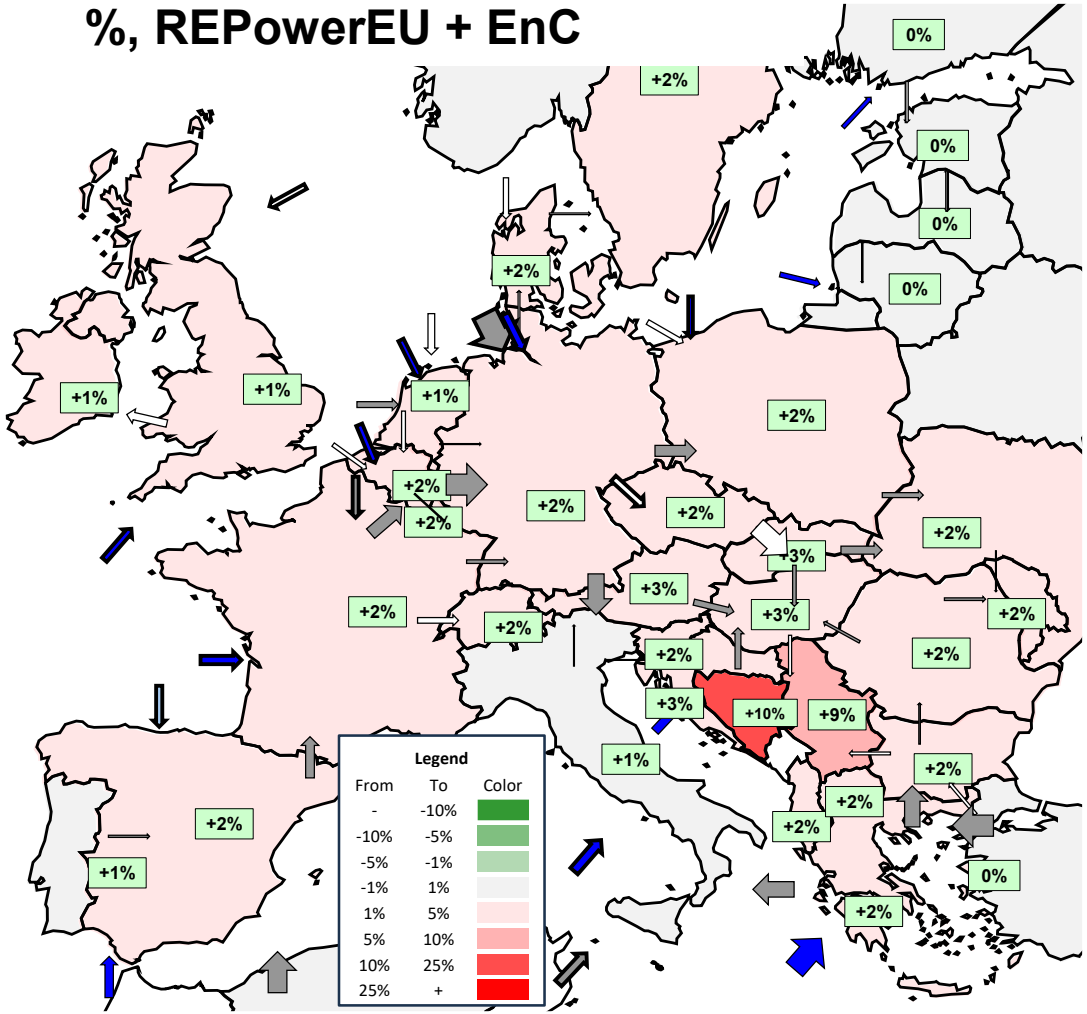
JKM=60 EUR/MWh

REPowerEU Roadmap effects, %

Wholesale price increase 2028 %, REPowerEU

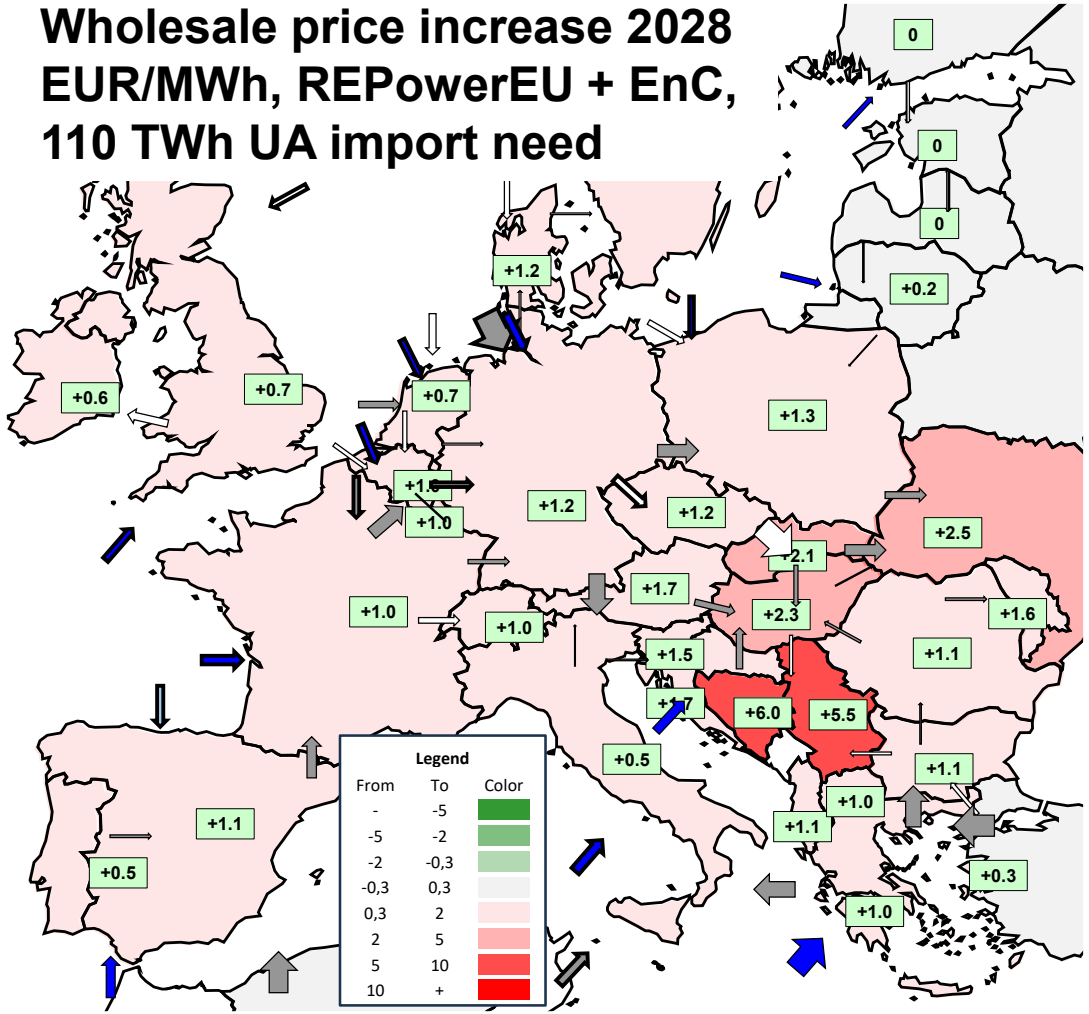


Wholesale price increase 2028 %, REPowerEU + EnC

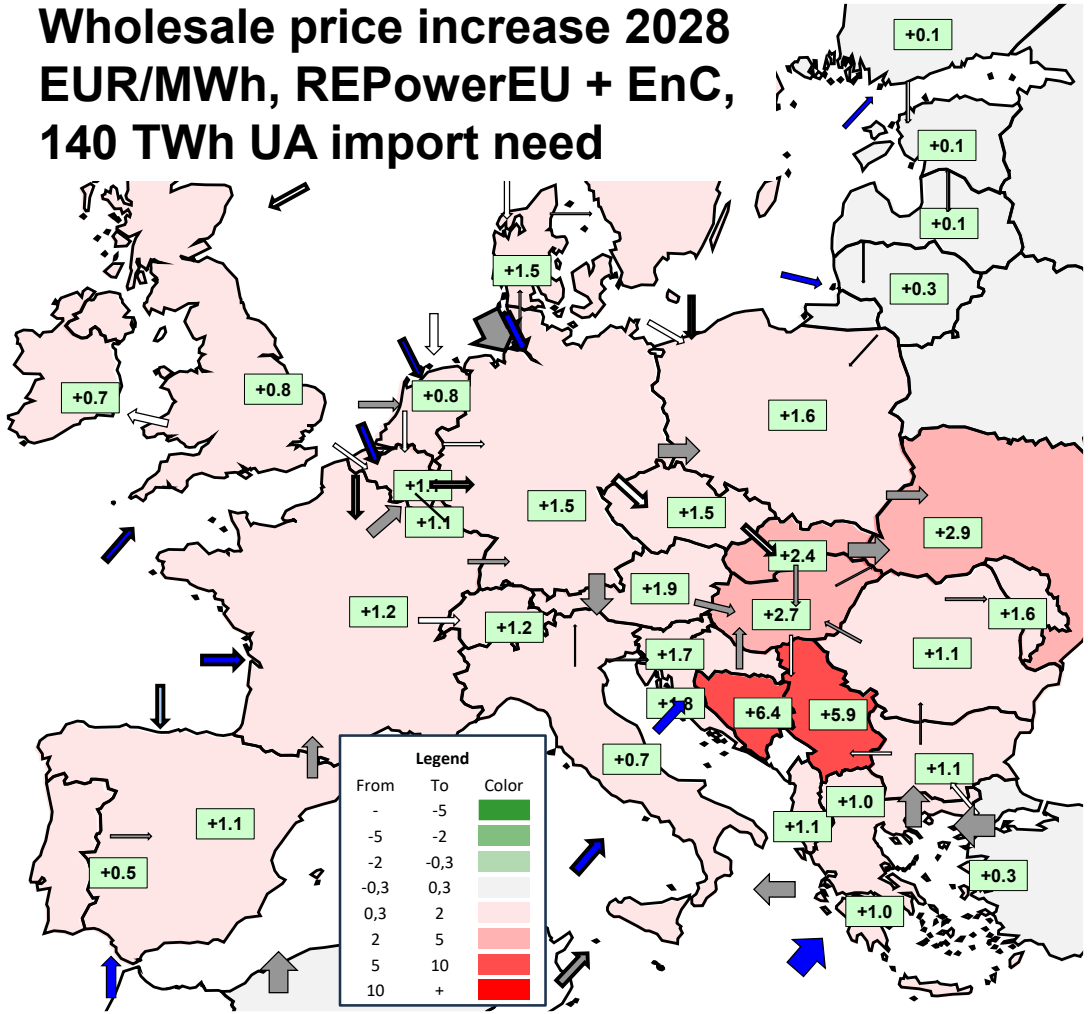


Effects of REPowerEU in EnC CPs and import need of Ukraine

Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC, 110 TWh UA import need

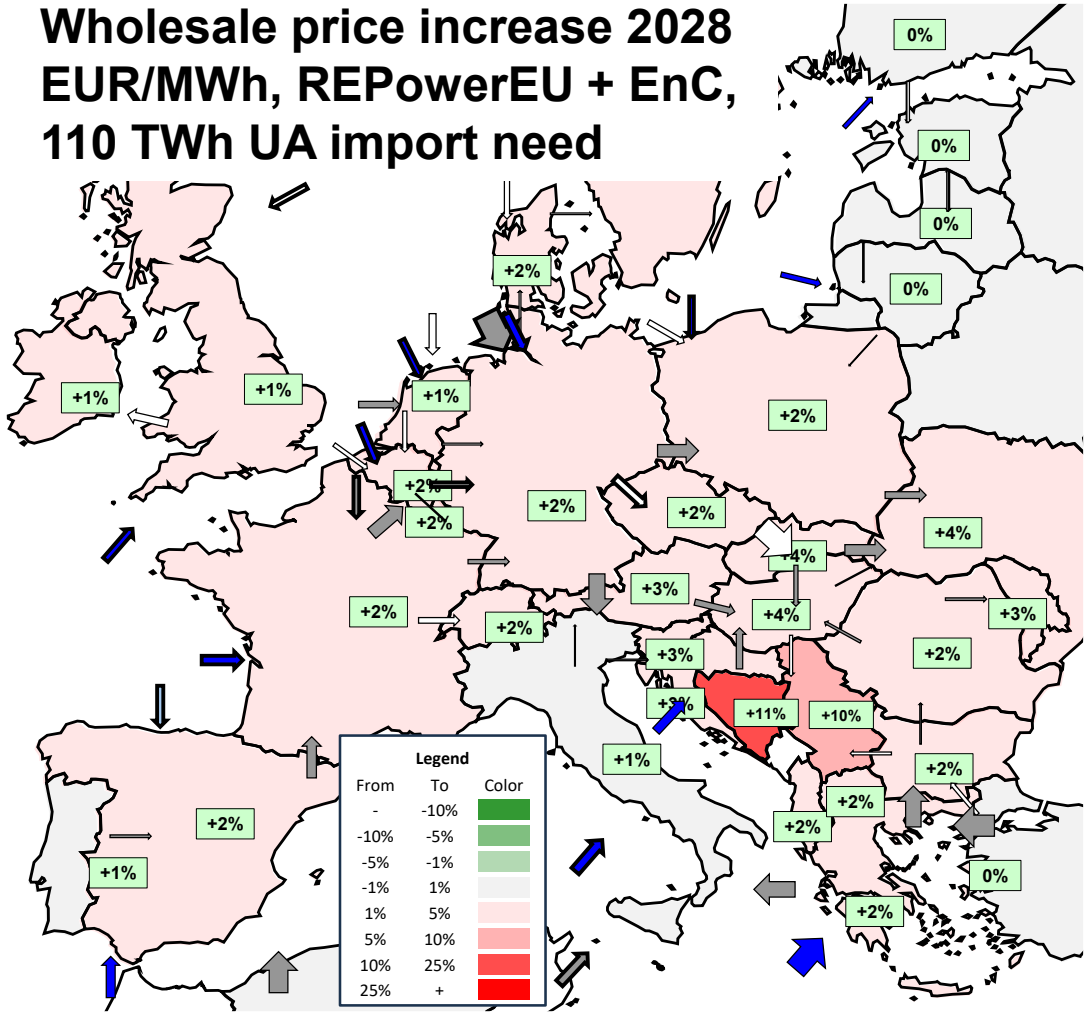


Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC, 140 TWh UA import need

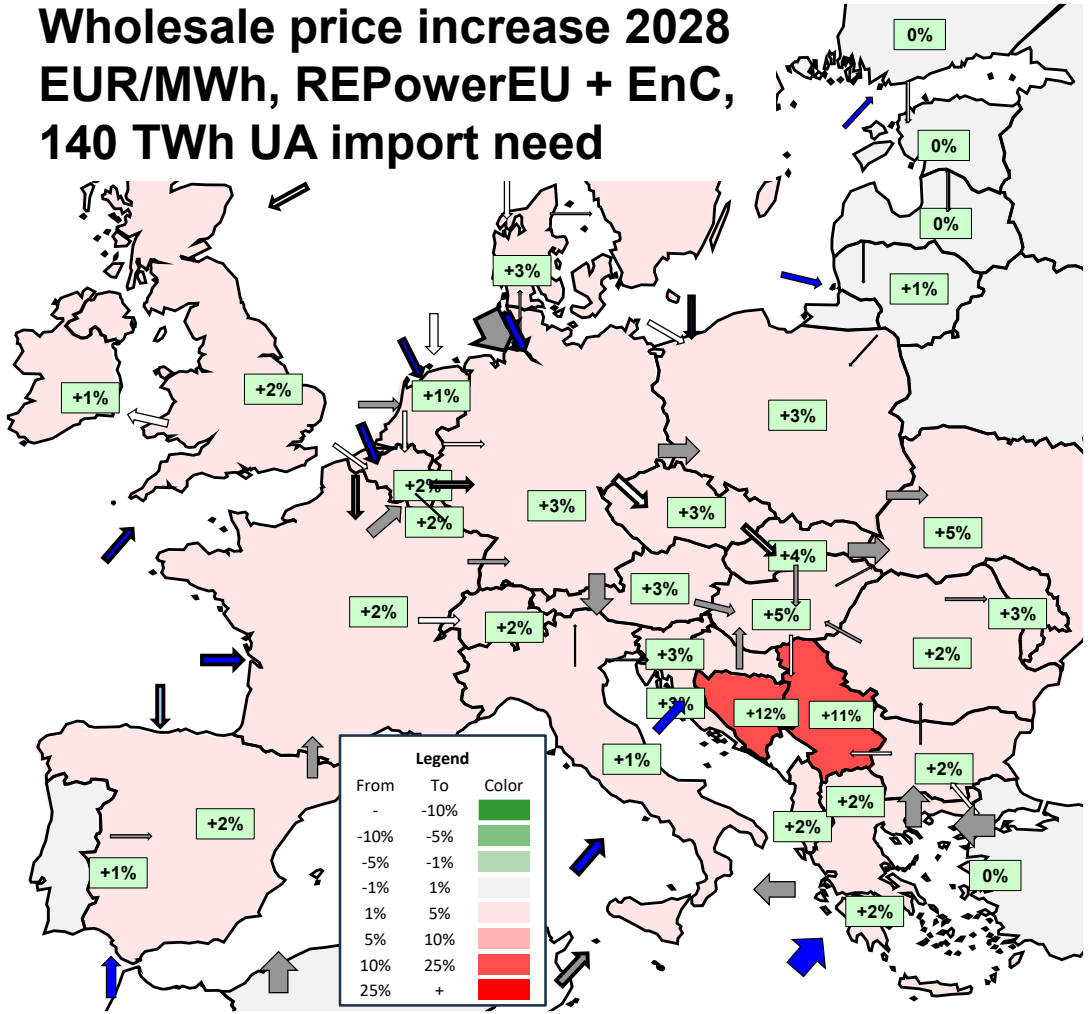


Effects of REPowerEU in EnC CPs and import need of Ukraine

Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC, 110 TWh UA import need

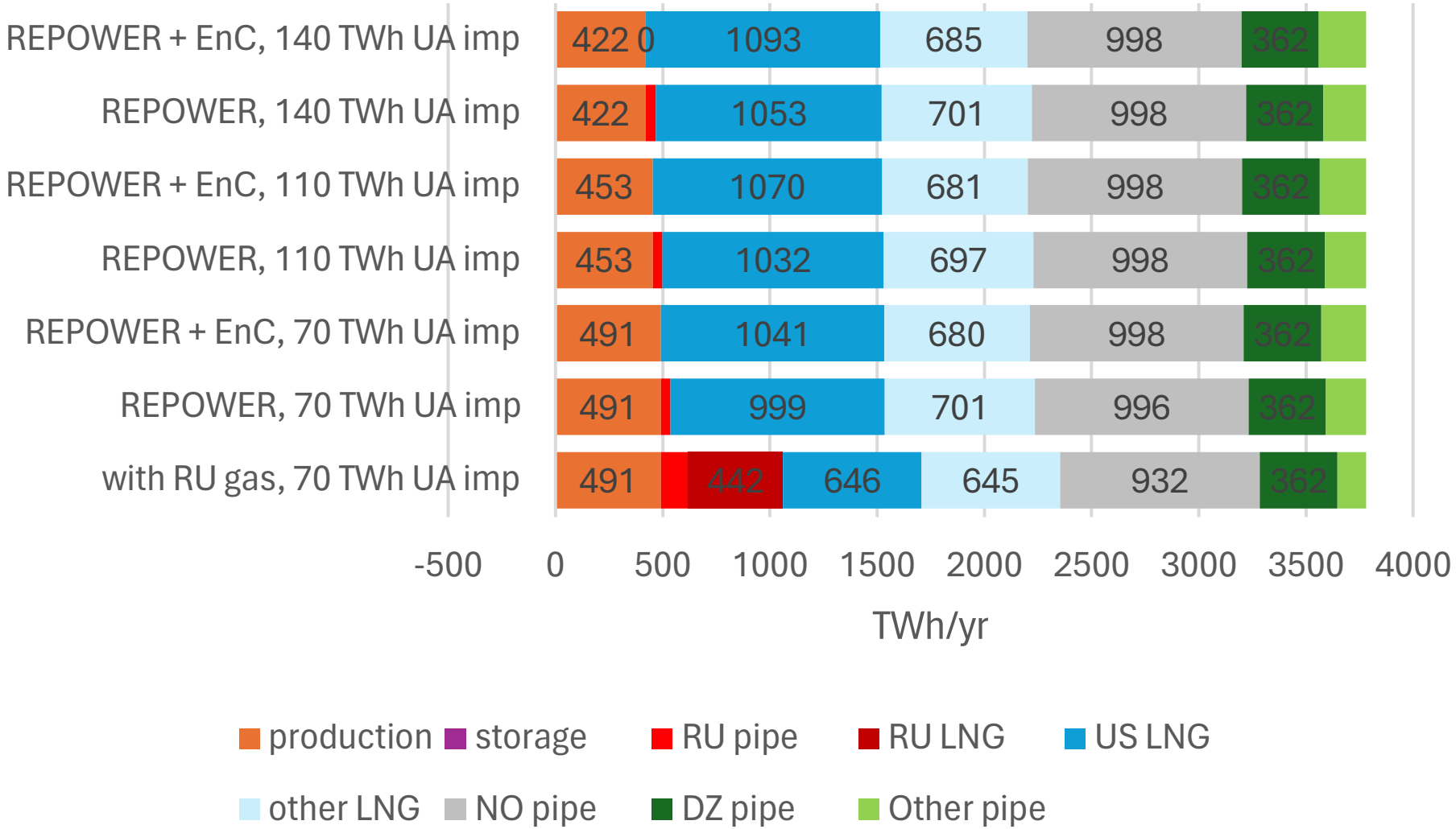


Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC, 140 TWh UA import need



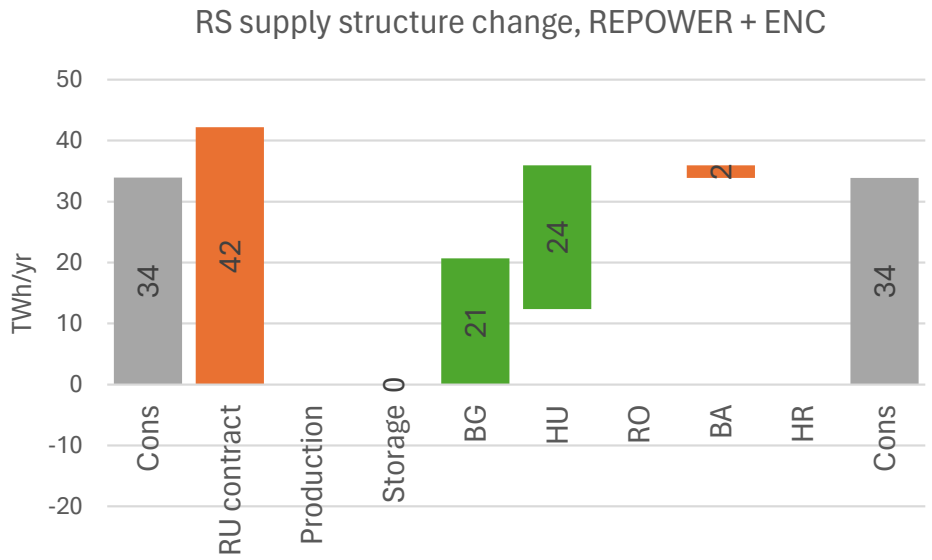
JKM=60 EUR/MWh

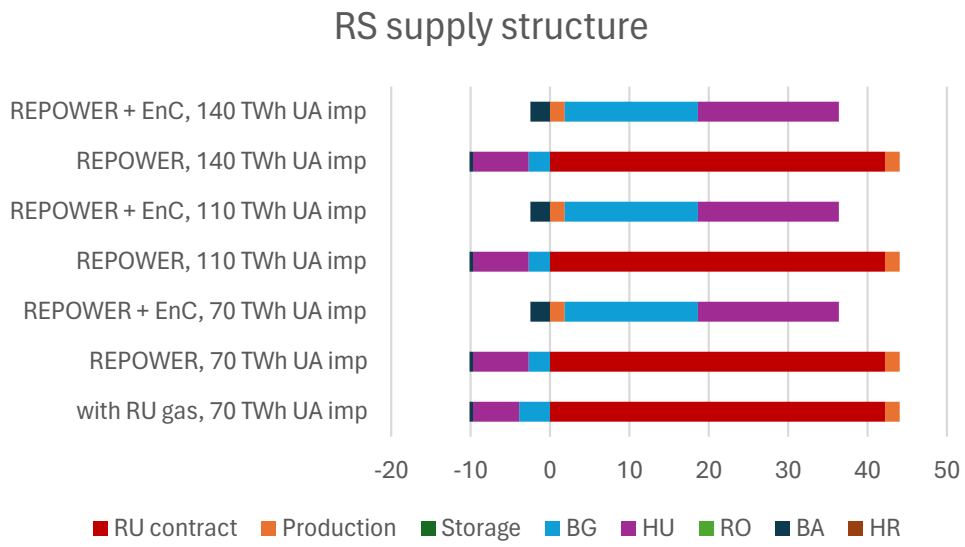
EU27 + EnC supply structure modelled 2028

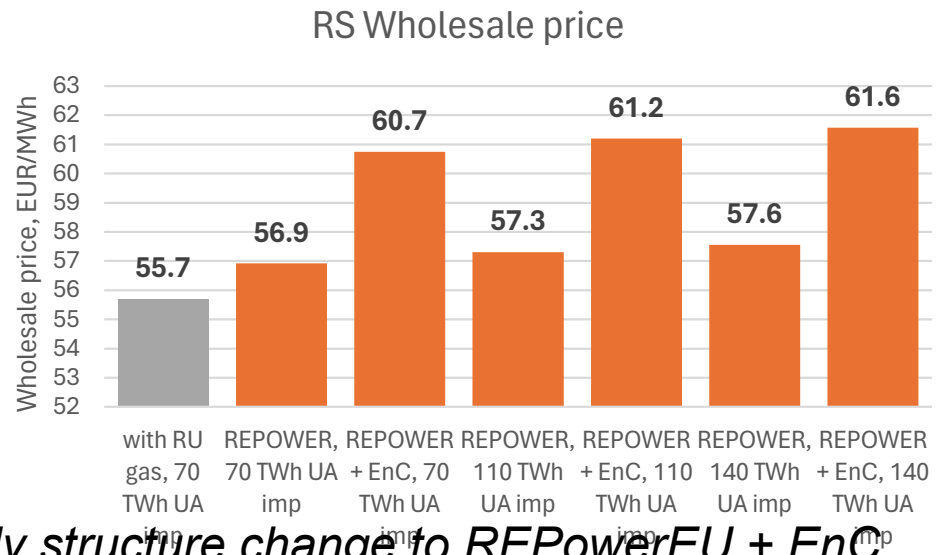


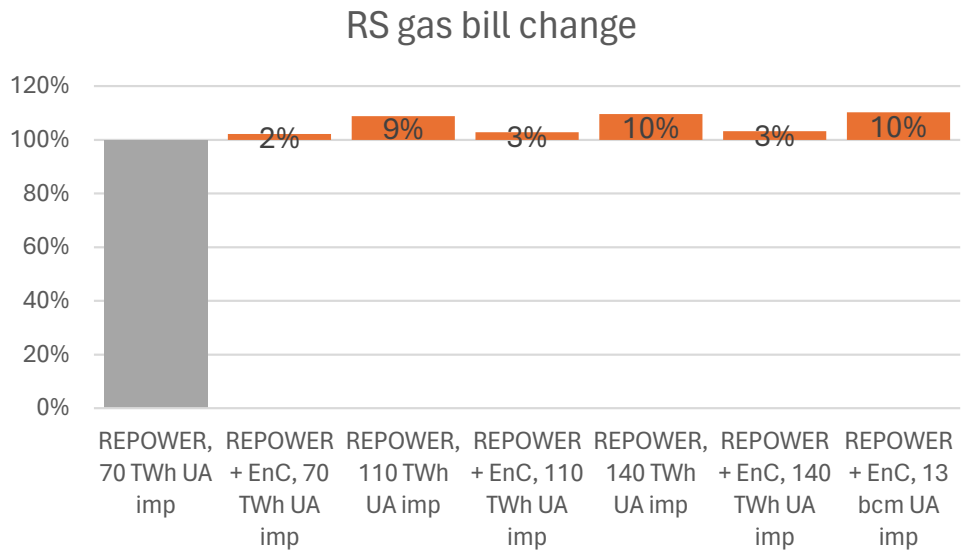
JKM=60 EUR/MWh

RS results





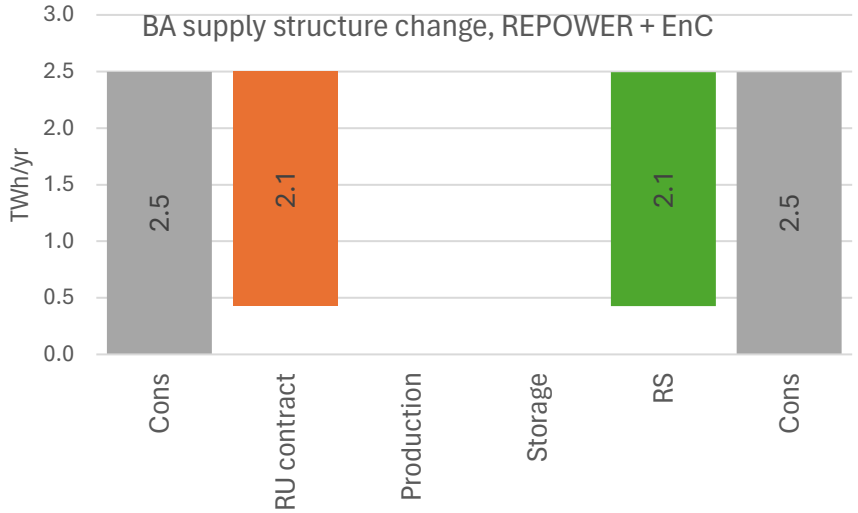


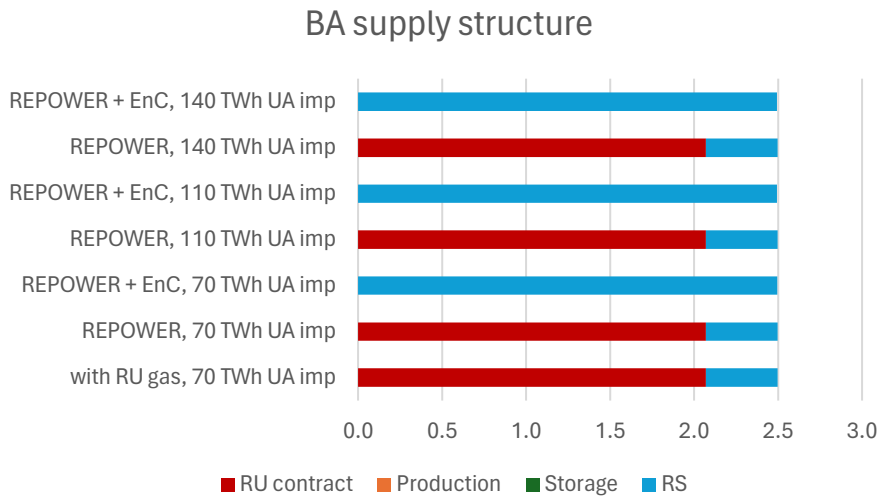


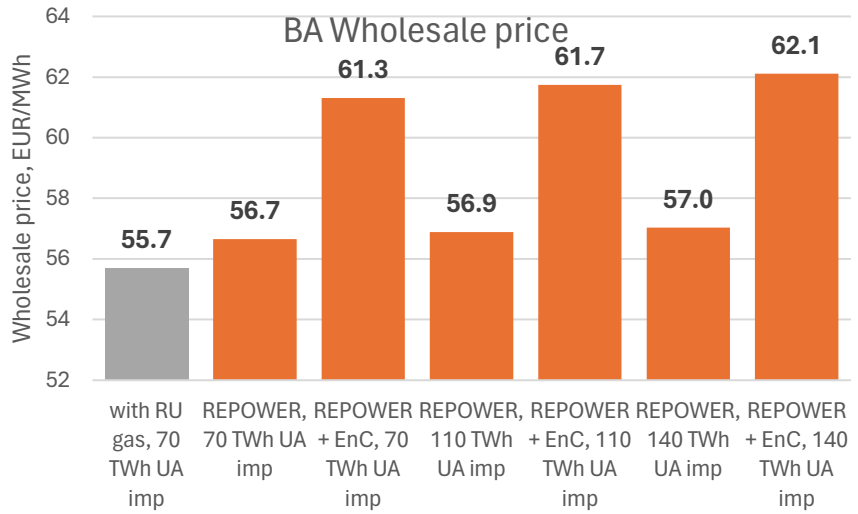
Supply structure change to REPowerEU + EnC and 140 TWh UA import need

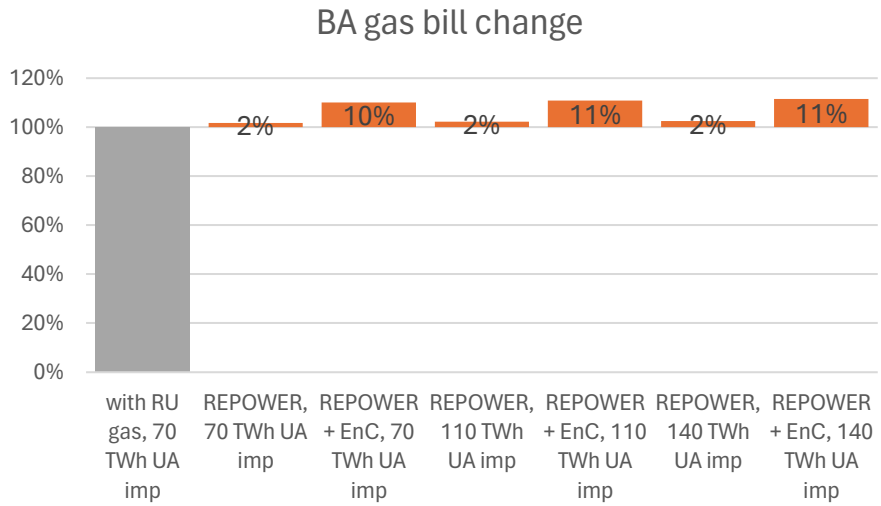
JKM=60 EUR/MWh

BA results





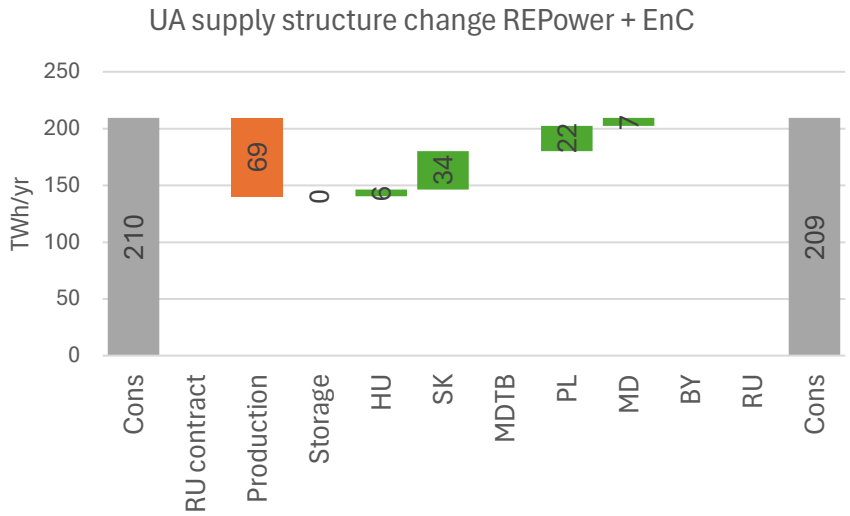


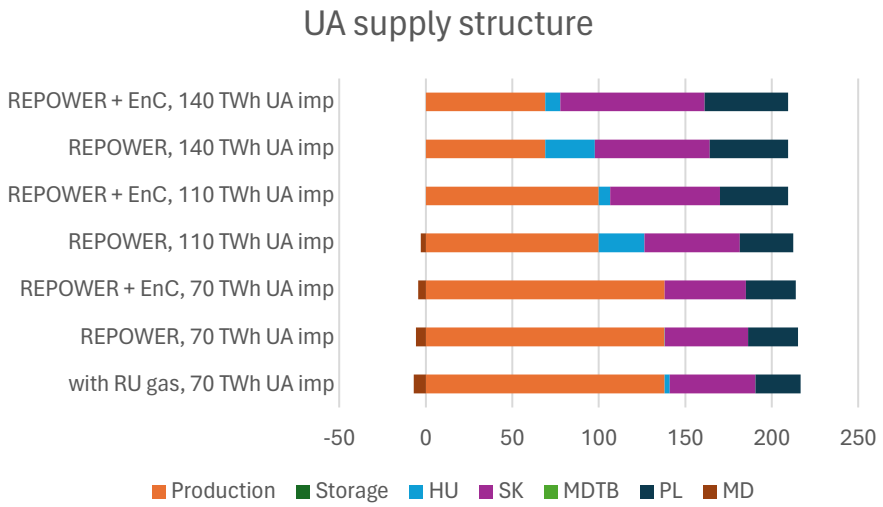


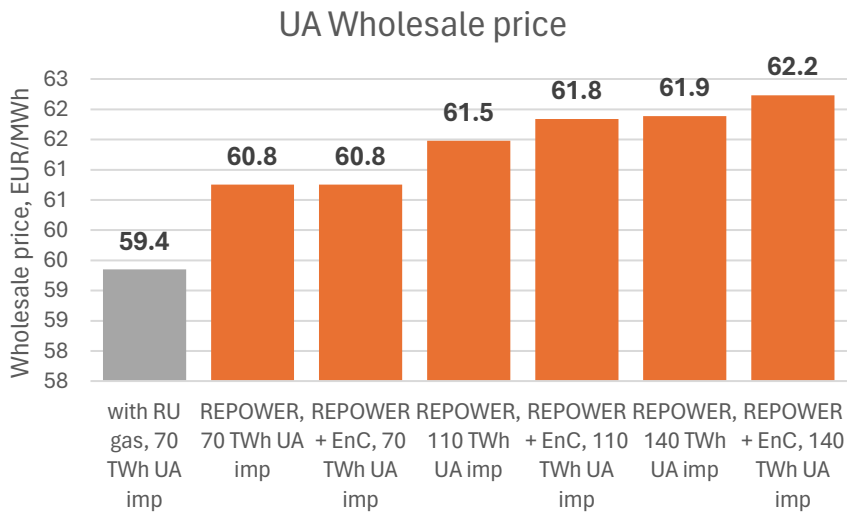
Supply structure change to Repower + EnC and 140 TWh UA import need

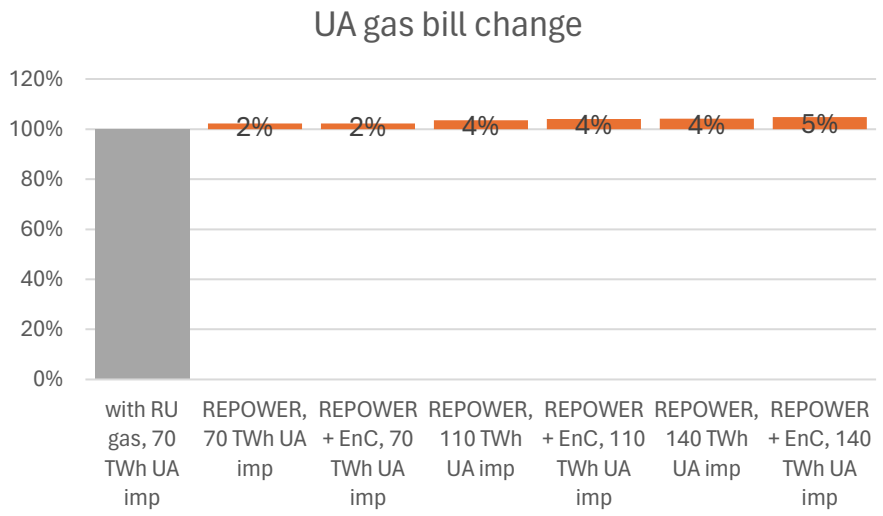
JKM=60 EUR/MWh

UA results





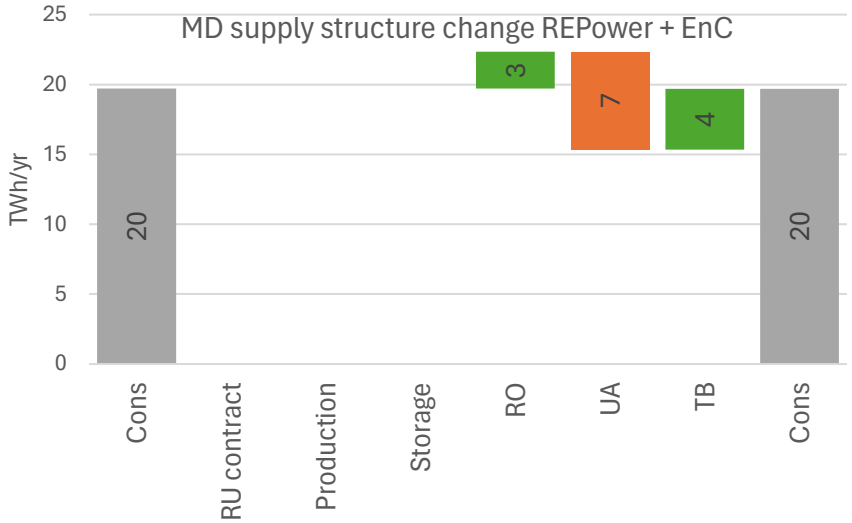


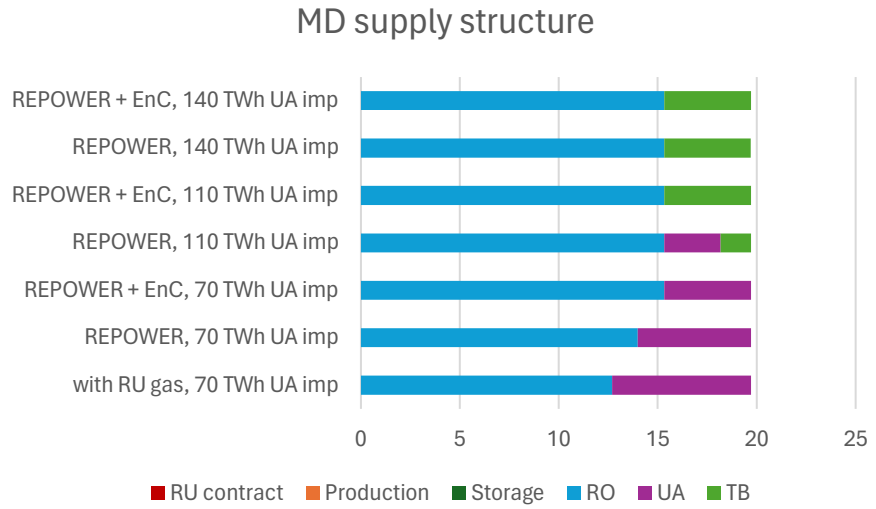


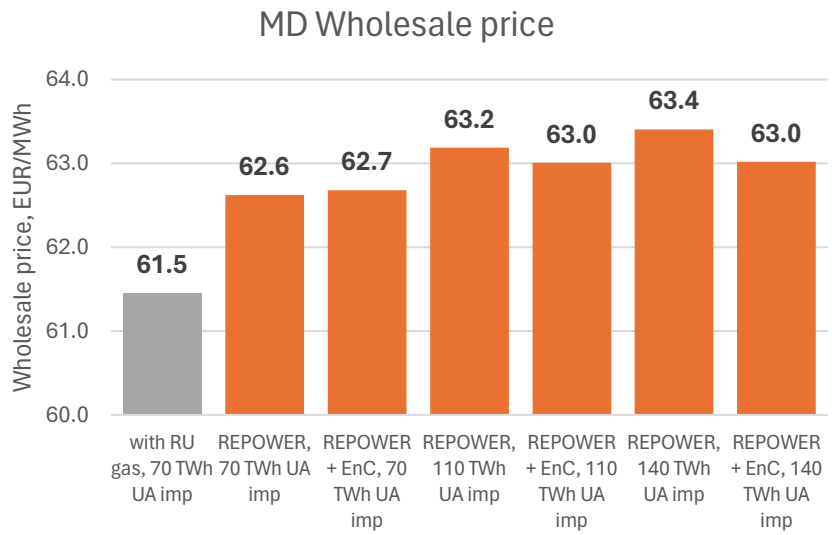
Supply structure change to REPowerEU + EnC and 140 TWh UA import need

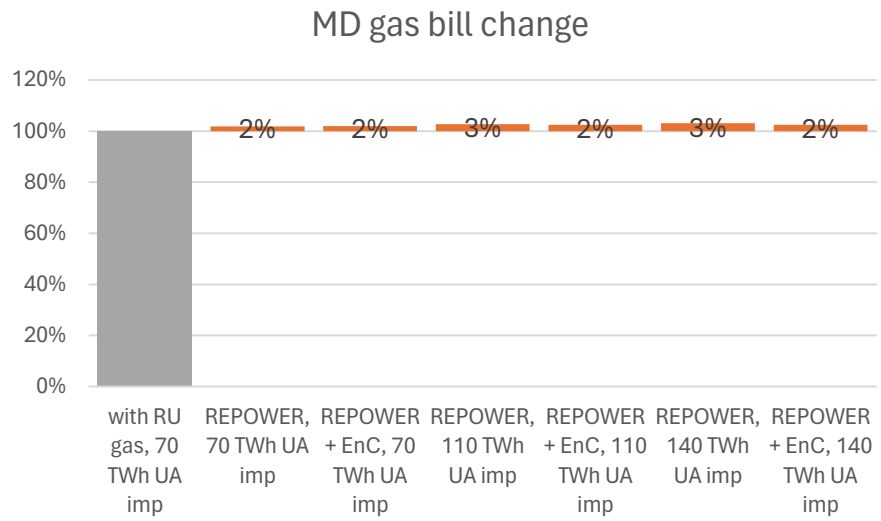
JKM=60 EUR/MWh

MD results





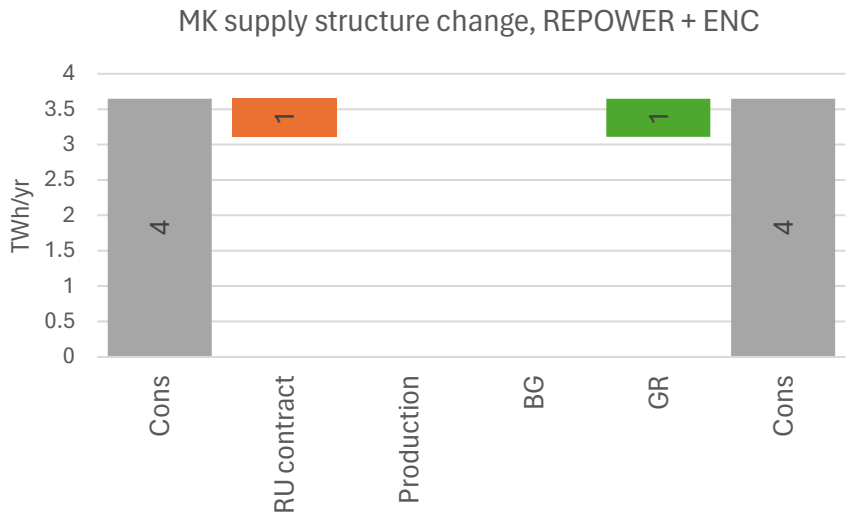


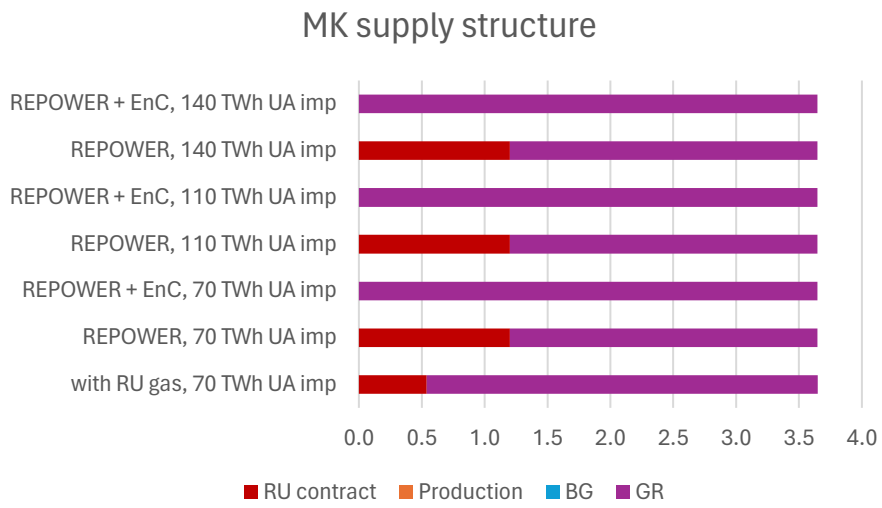


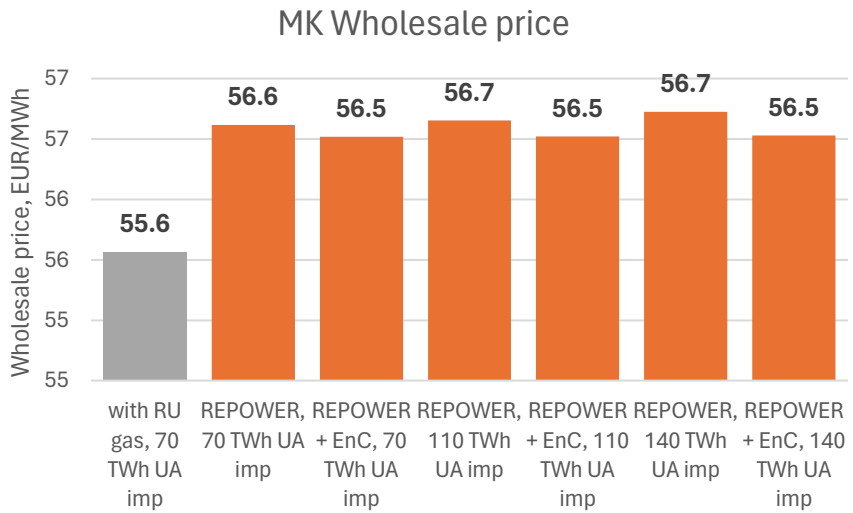
Supply structure change to Repower + EnC and 140 TWh UA import need

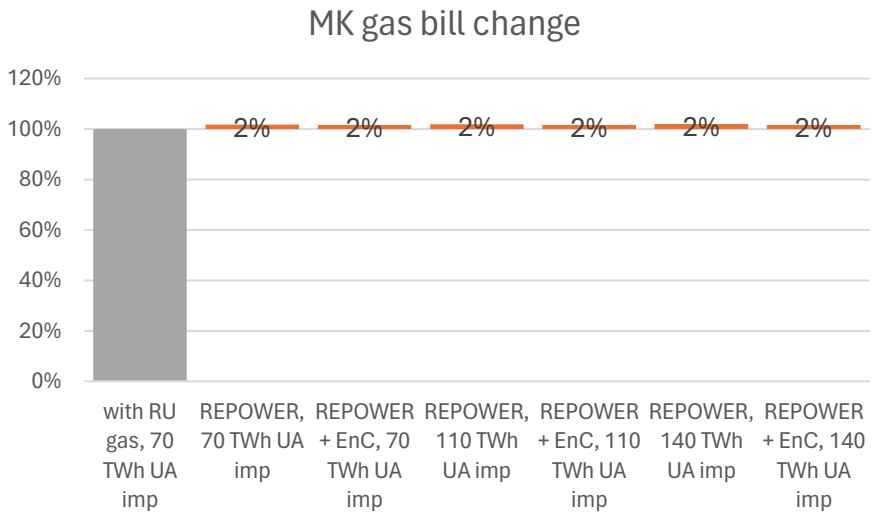
JKM=60 EUR/MWh

MK results







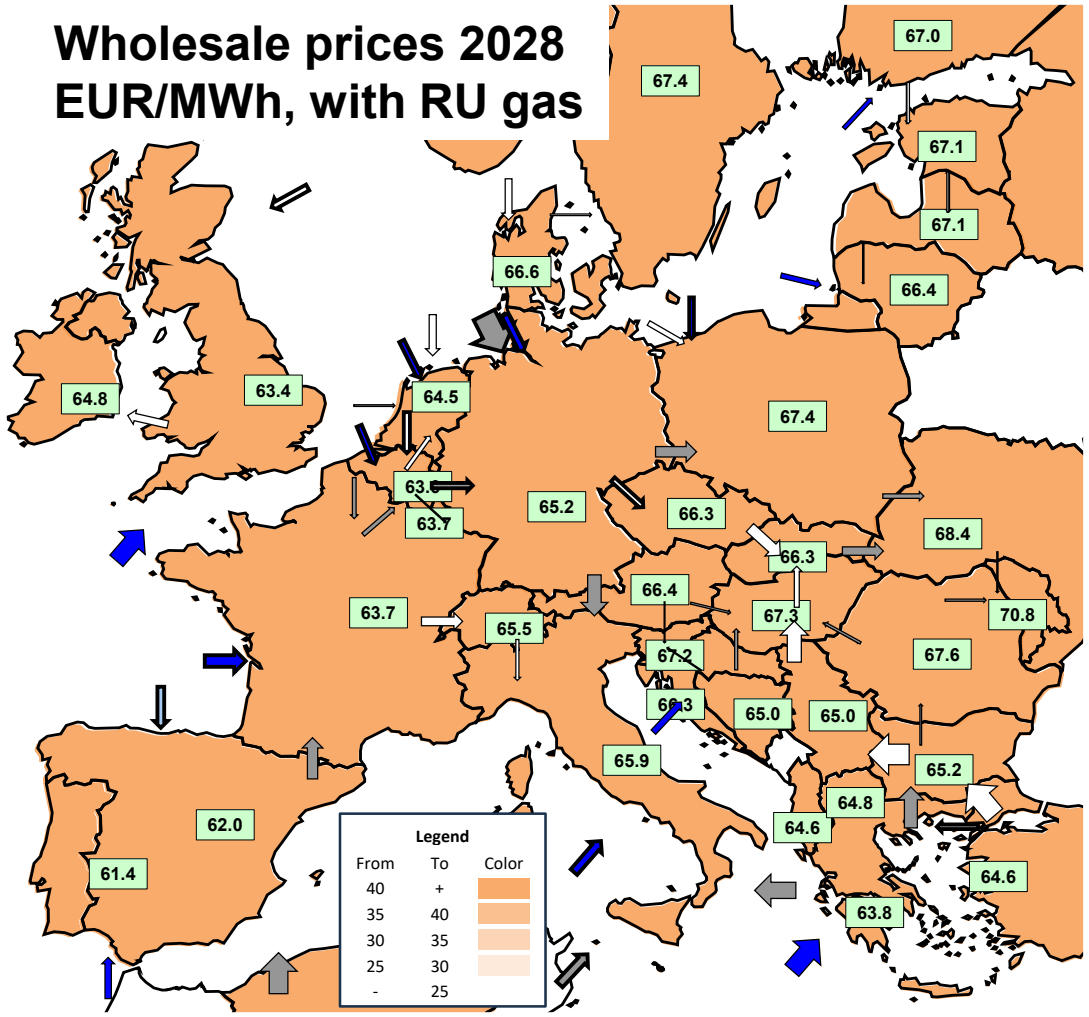


Supply structure change to REPowerEU + EnC and 140 TWh UA import need

JKM = 70 EUR/MWH

JKM=70 EUR/MWh

Baseline 2028 with Russian gas



- Russian gas is already minor in the mix of the EU27
- LNG terminals utilization is already high, main source of LNG is US
- Wholesale gas prices in EU markets vary:
  - Iberian Peninsula: abundant LNG, but limited connection to the EU gas markets (~62/MWh)
  - NW Europe 63-65 EUR/MWh
  - Central Europe 66-67 EUR/MWh
  - RS, BA: 65 EUR/MWh
  - MK: 65 EUR/MWh
  - UA, MD: 68-71 EUR/MWh

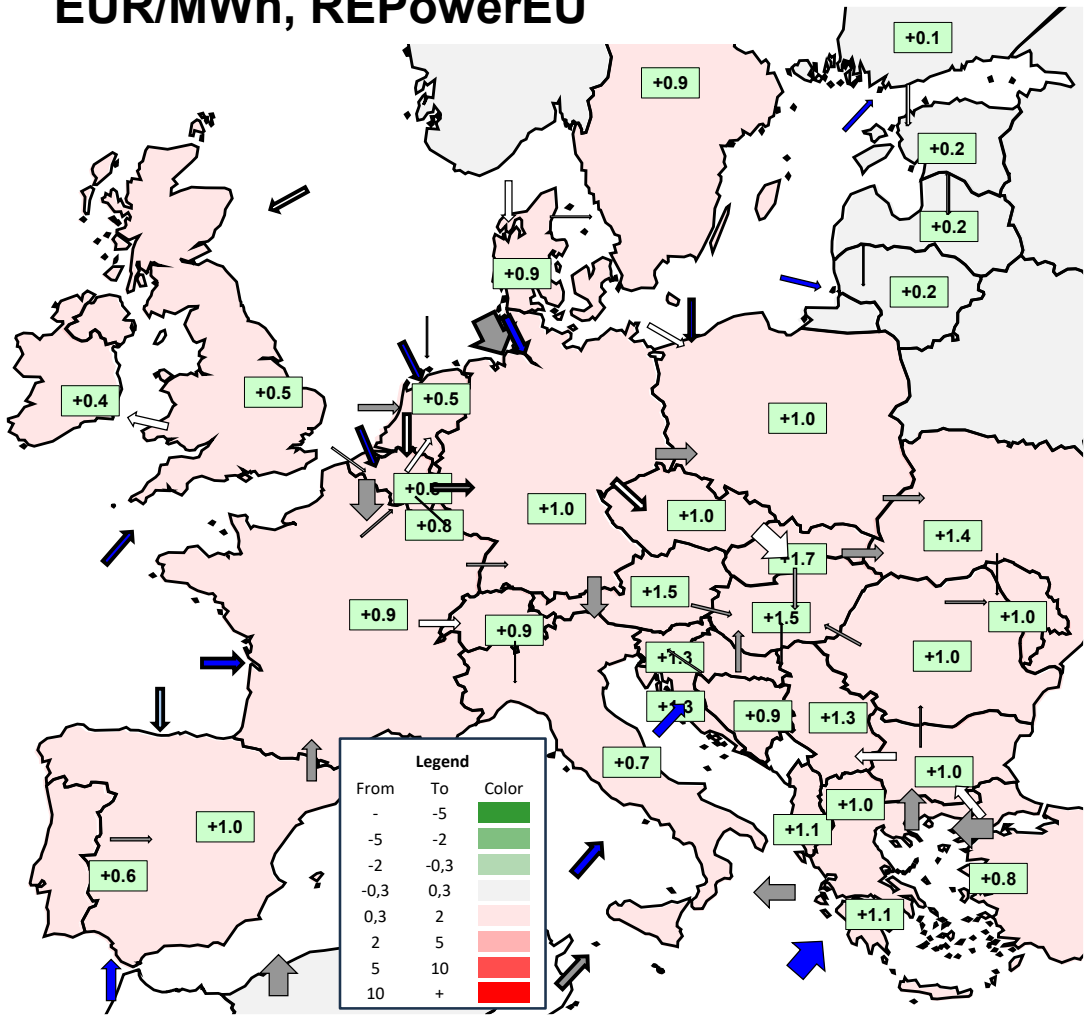
JKM=70 EUR/MWh

Scenarios

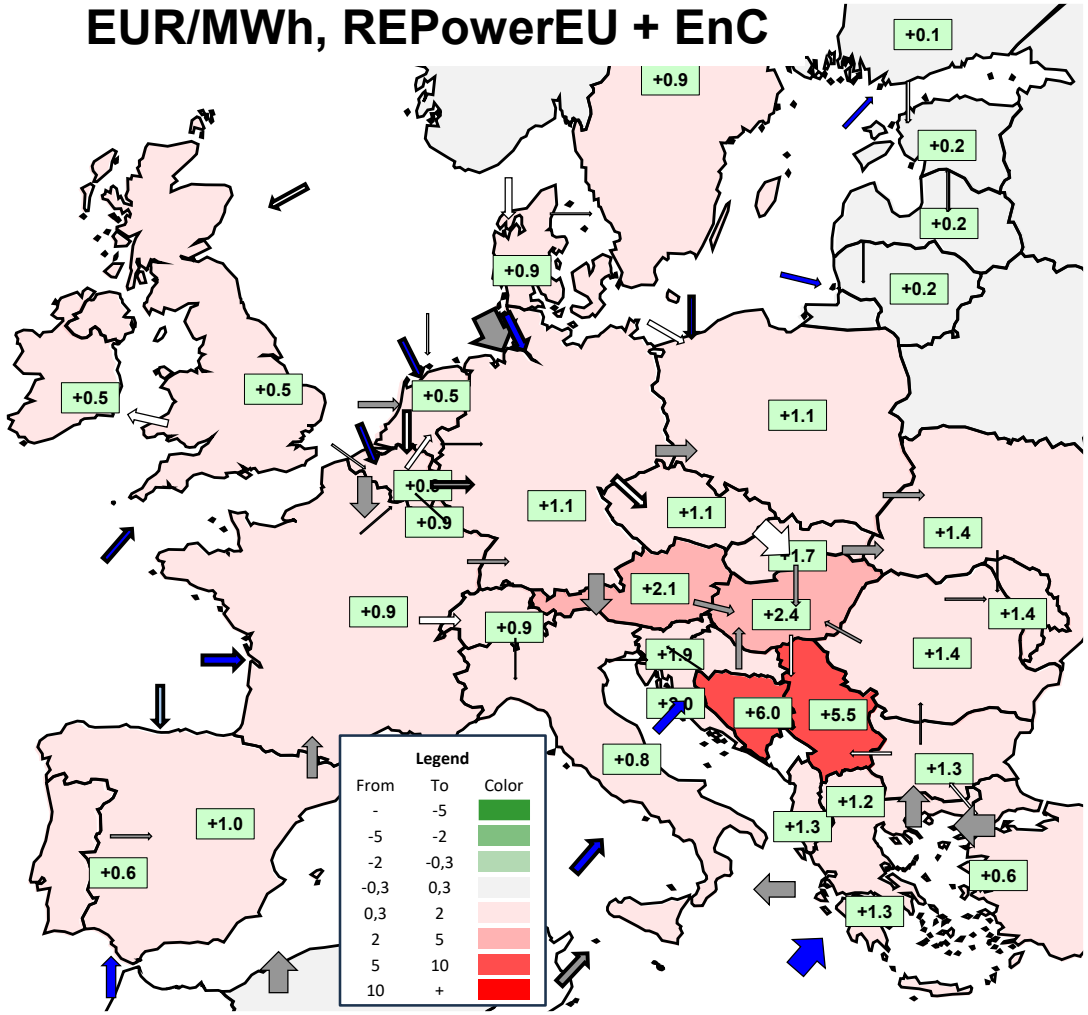
	Year	Repower	JP	EU demand	LNG regas availability	storage start	storage end	UA import need
51	2028	no Repower	60	REF	80%	30%	30%	70 TWh
54	2028	REPOWER	60	REF	80%	30%	30%	70 TWh
57	2028	REPOWER + EnC	60	REF	80%	30%	30%	70 TWh
63	2028	REPOWER	60	REF	80%	30%	30%	110 TWh
66	2028	REPOWER + EnC	60	REF	80%	30%	30%	110 TWh
72	2028	REPOWER	60	REF	80%	30%	30%	140 TWh
75	2028	REPOWER + EnC	60	REF	80%	30%	30%	140 TWh

REPowerEU Roadmap effects, EUR/MWh

Wholesale price increase 2028 EUR/MWh, REPowerEU

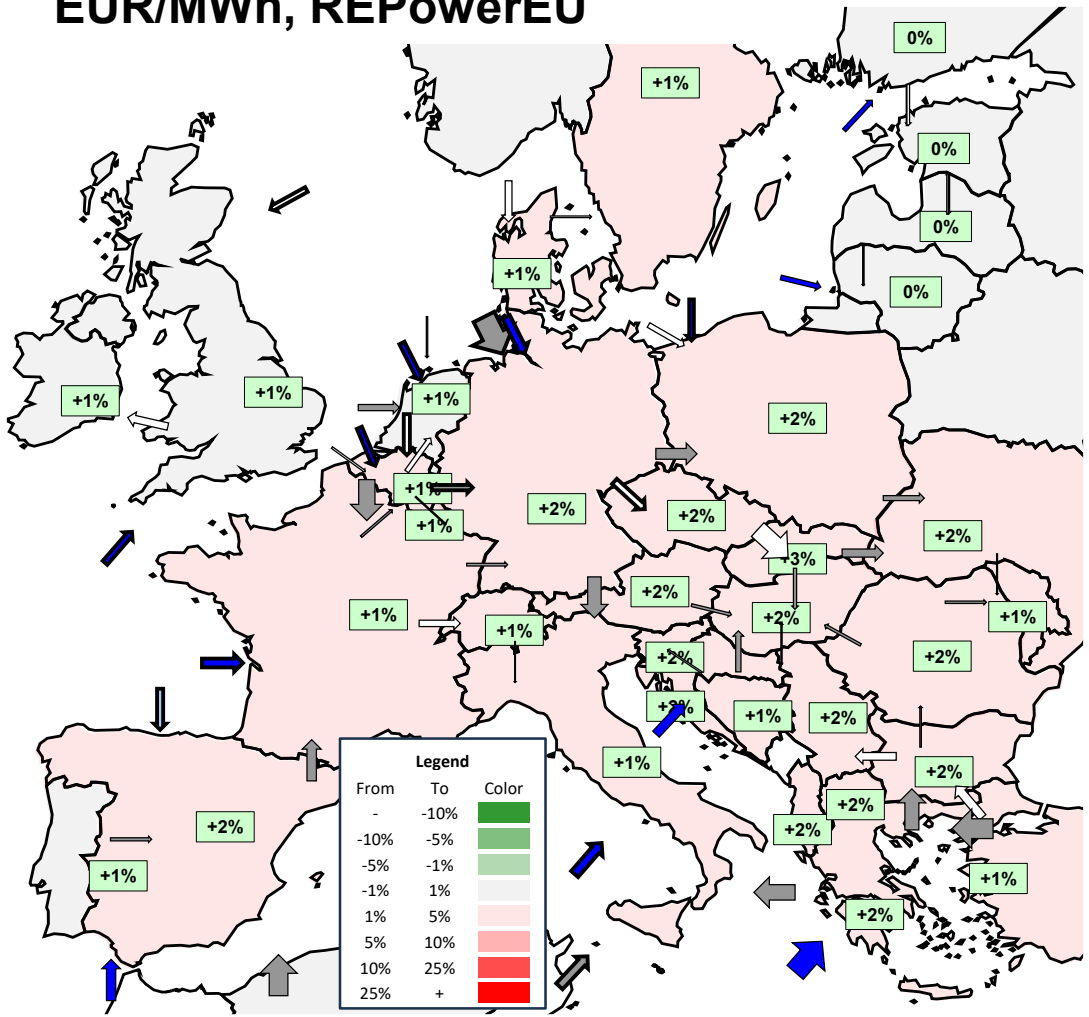


Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC

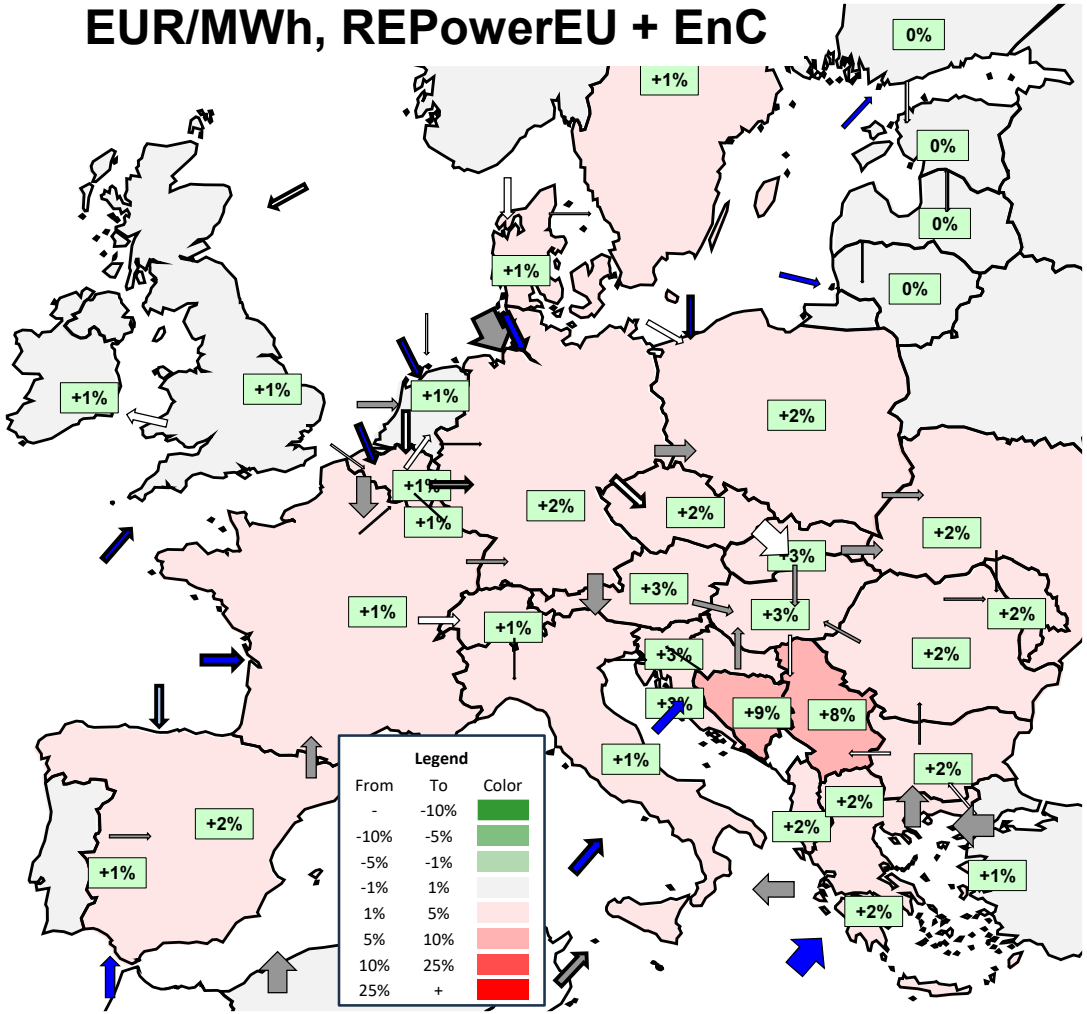


REPowerEU Roadmap effects, %

Wholesale price increase 2028 EUR/MWh, REPowerEU

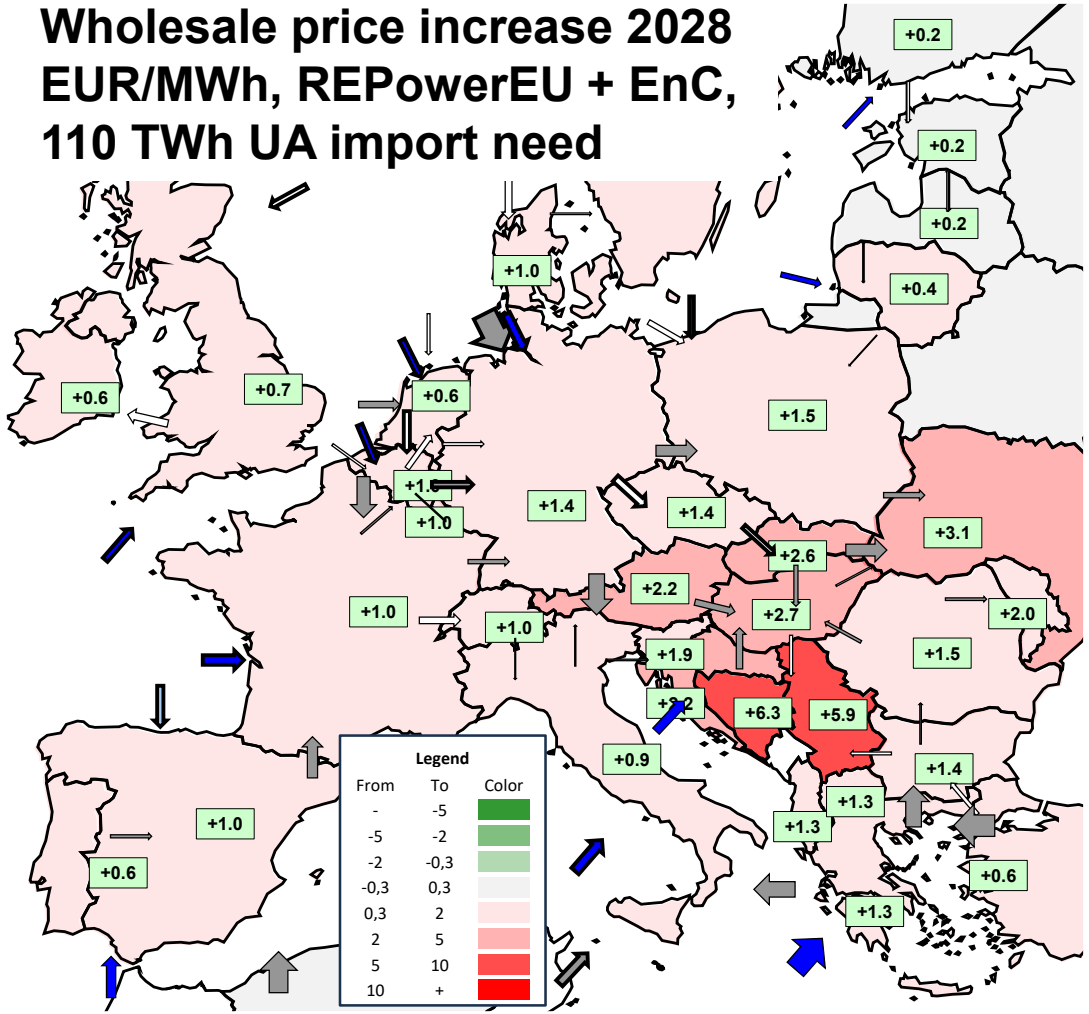


Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC

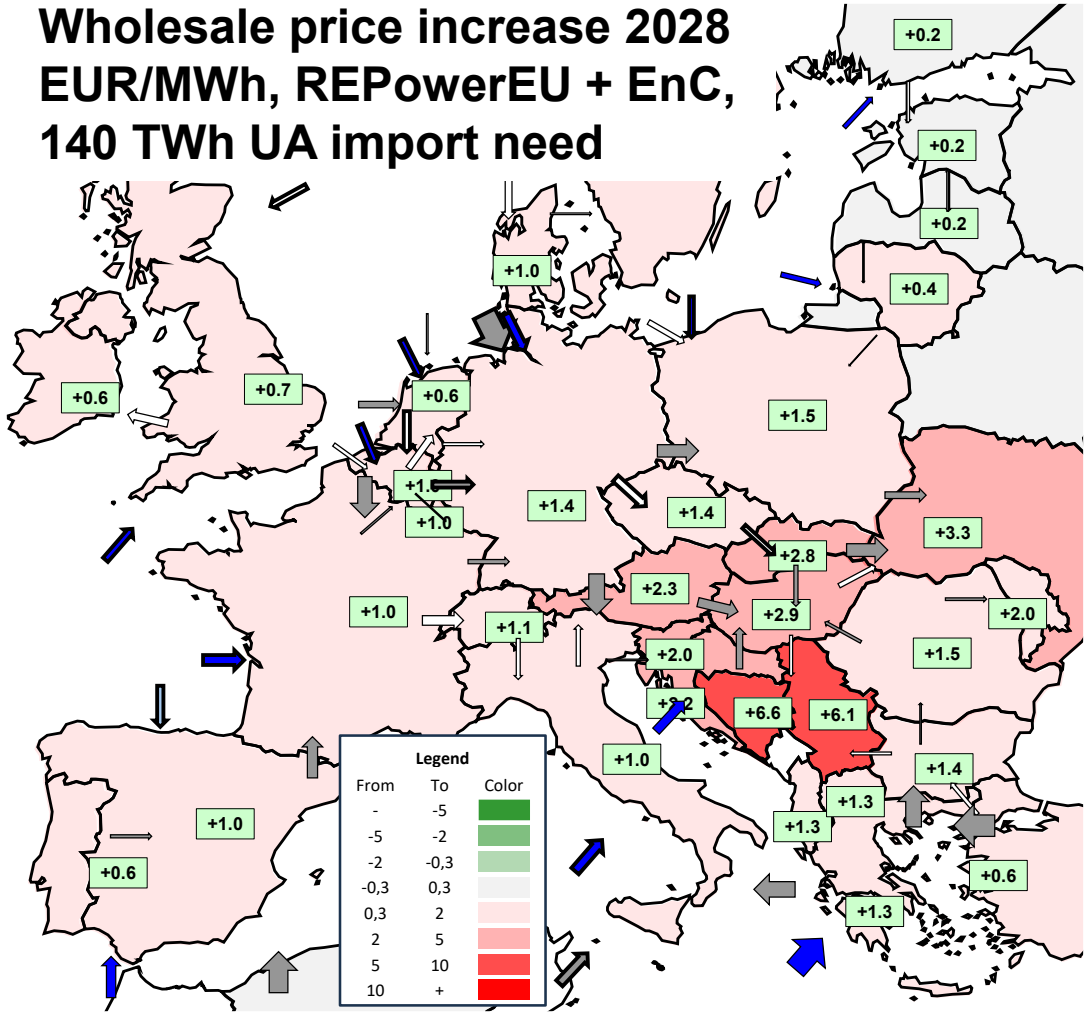


Effects of REPowerEU in EnC CPs and import need of Ukraine, EUR/MWh

Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC, 110 TWh UA import need

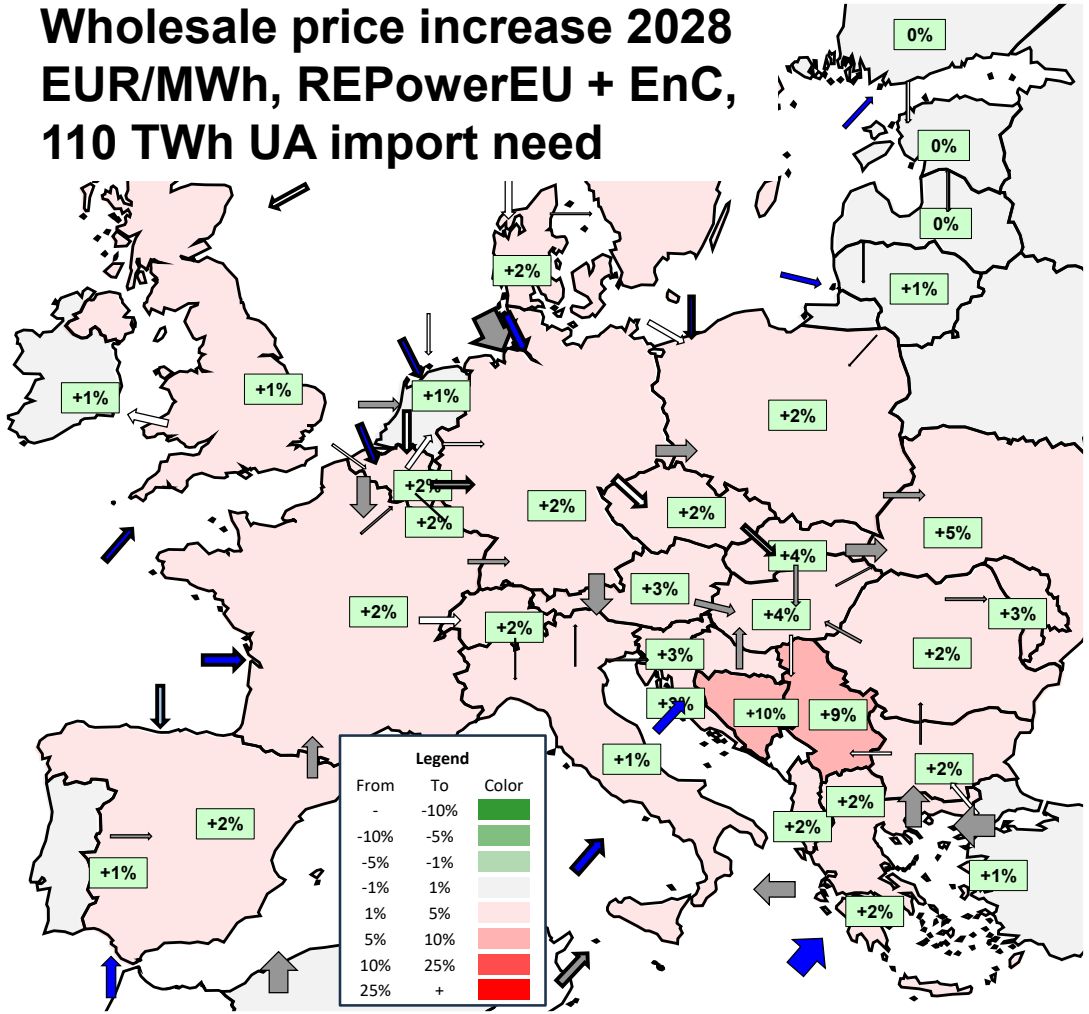


Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC, 140 TWh UA import need

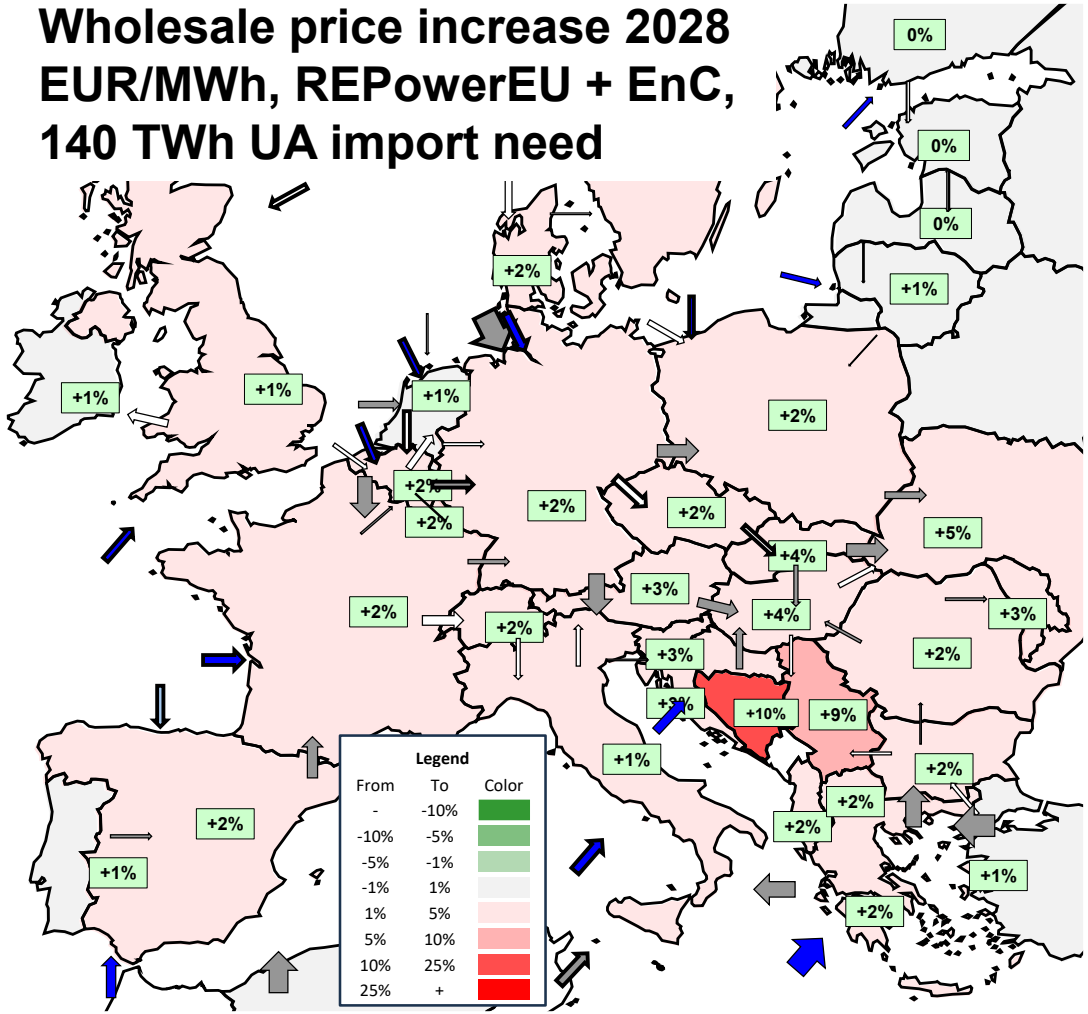


Effects of REPowerEU in EnC CPs and import need of Ukraine, %

Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC, 110 TWh UA import need

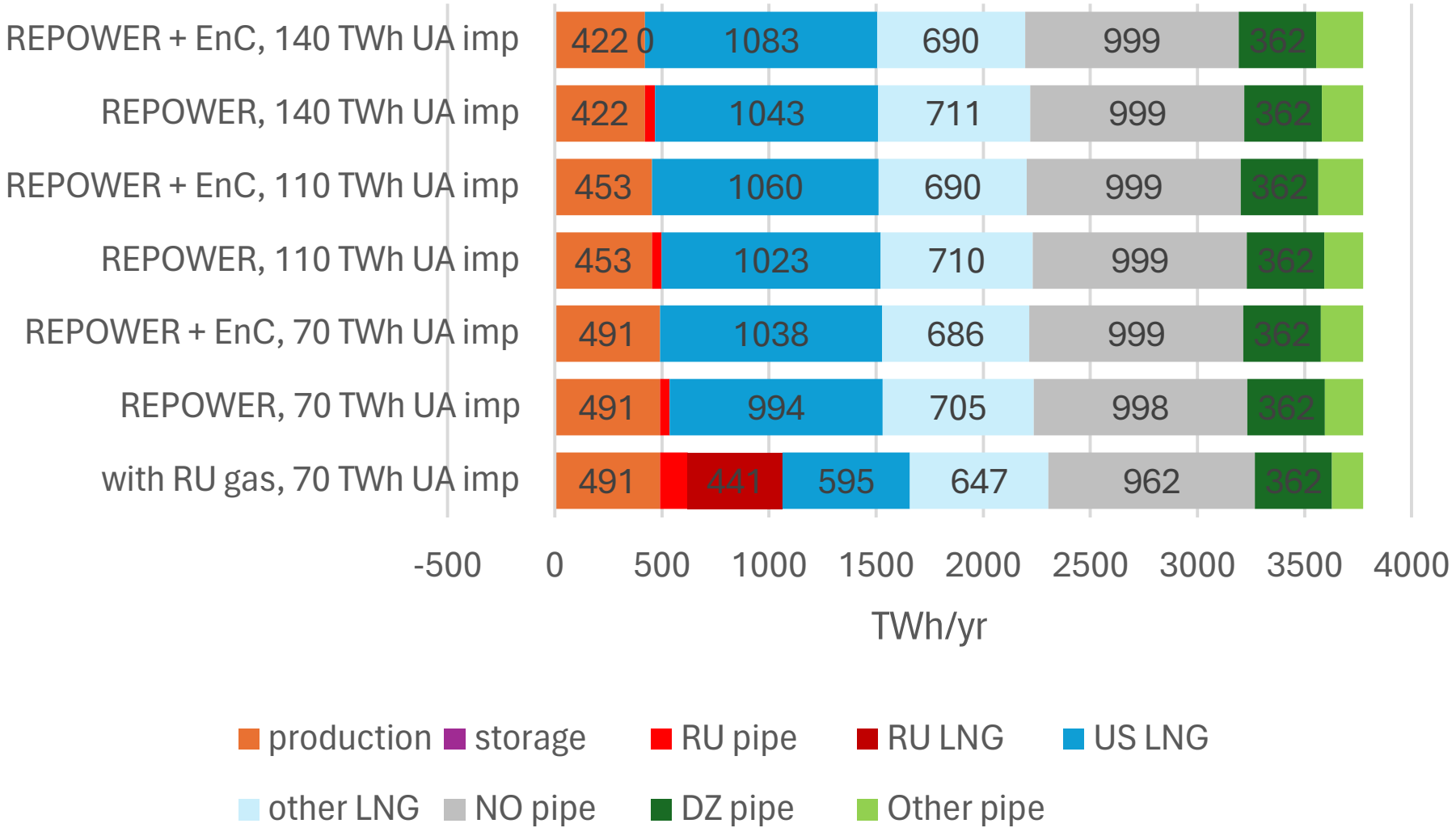


Wholesale price increase 2028 EUR/MWh, REPowerEU + EnC, 140 TWh UA import need

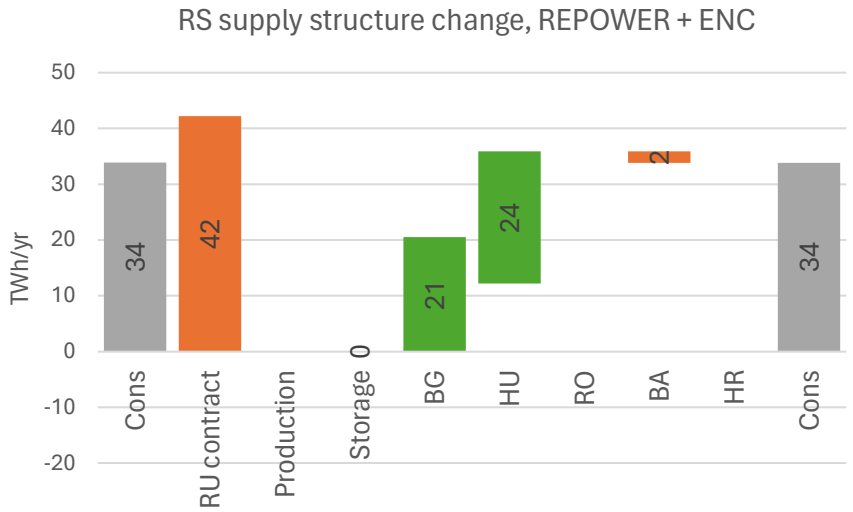


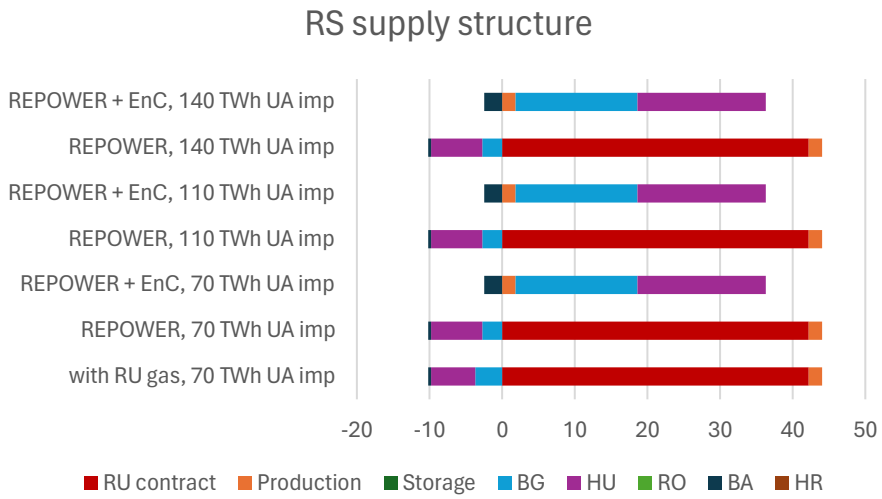
JKM=70 EUR/MWh

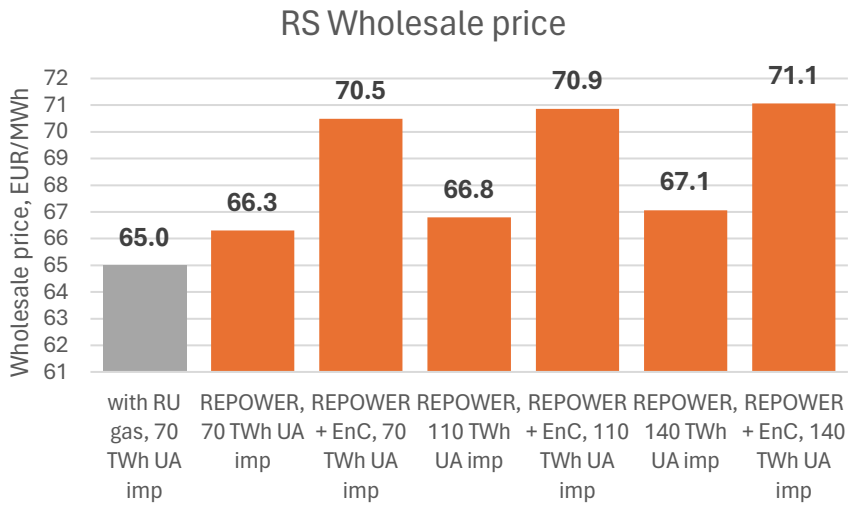
EU27 + EnC supply structure modelled 2028

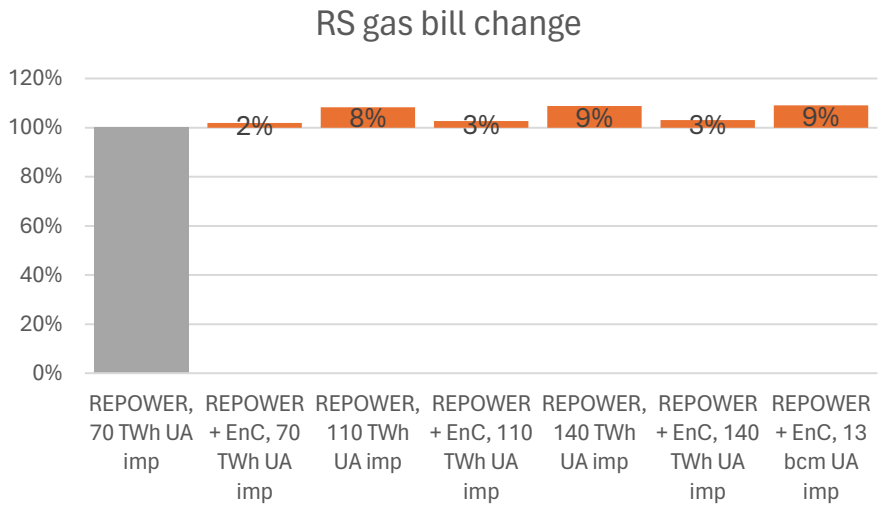


RS results



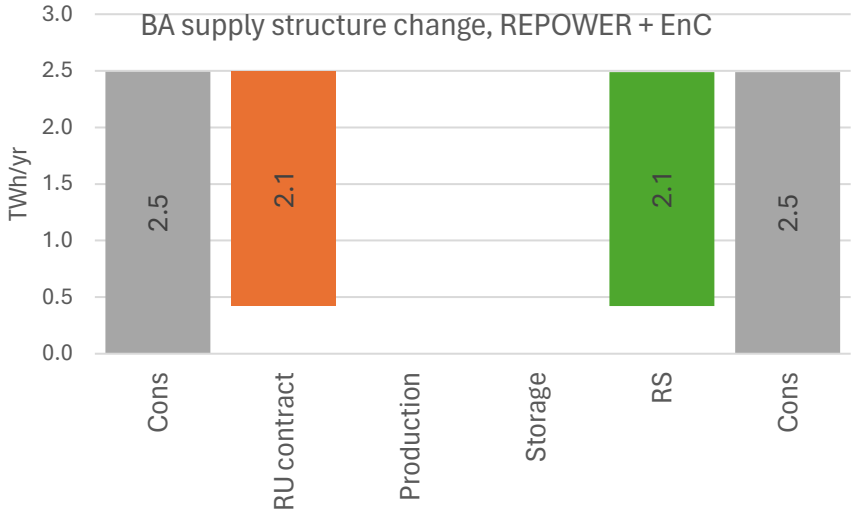


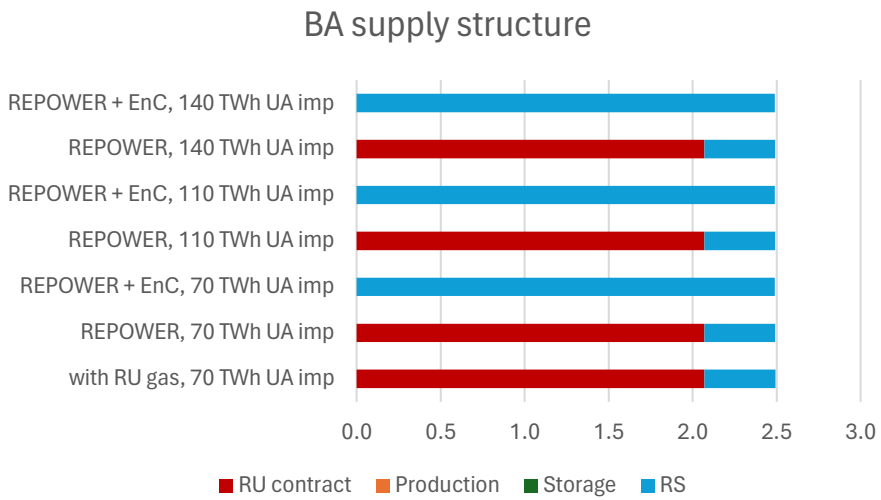


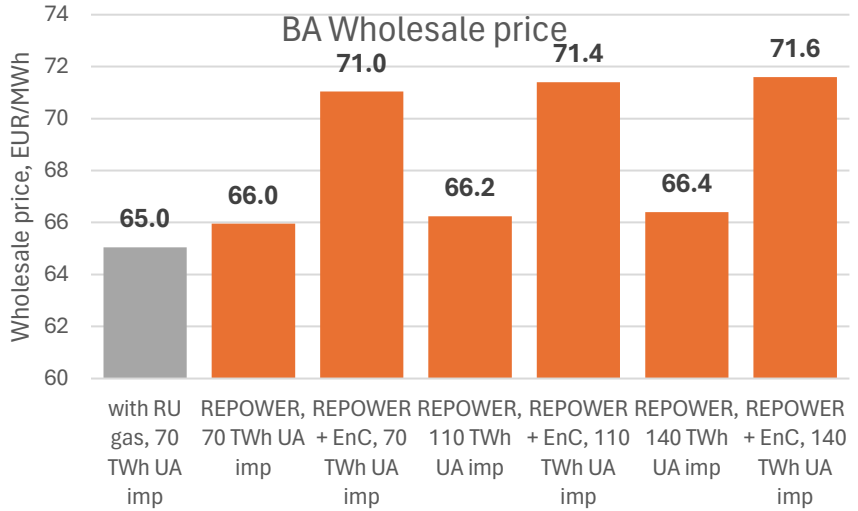


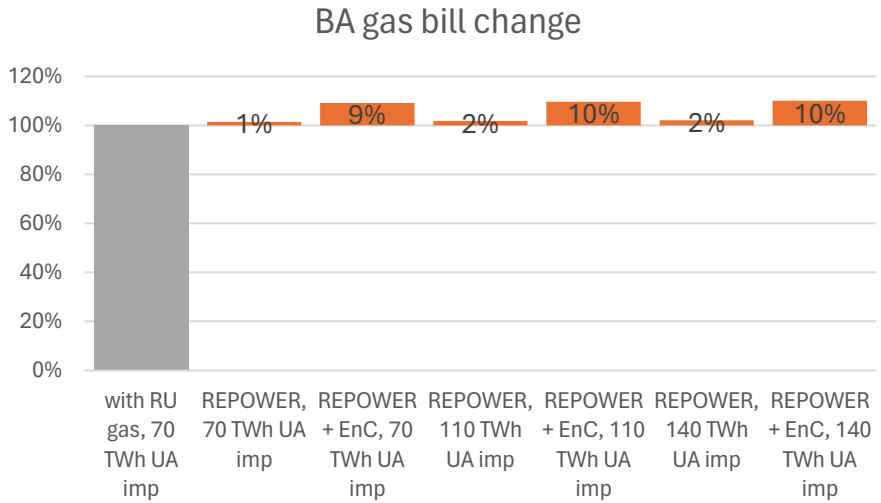
Supply structure change to REPowerEU + EnC and 140 TWh UA import need

BA results





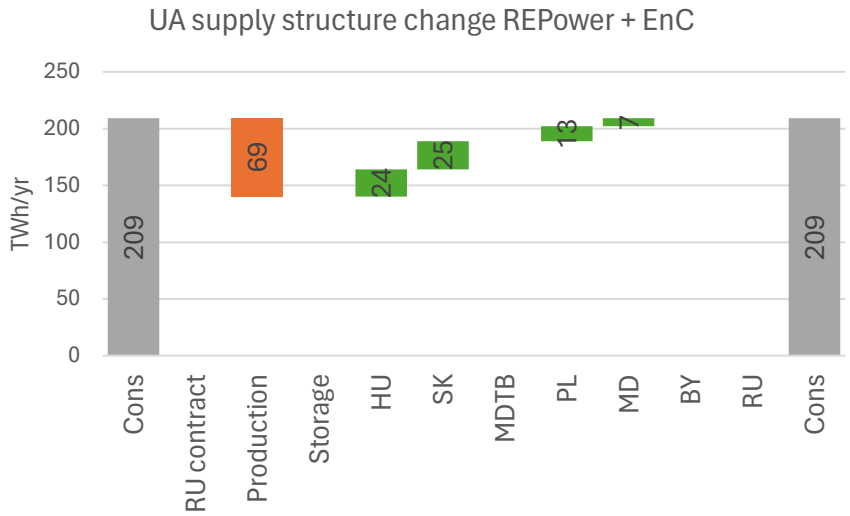


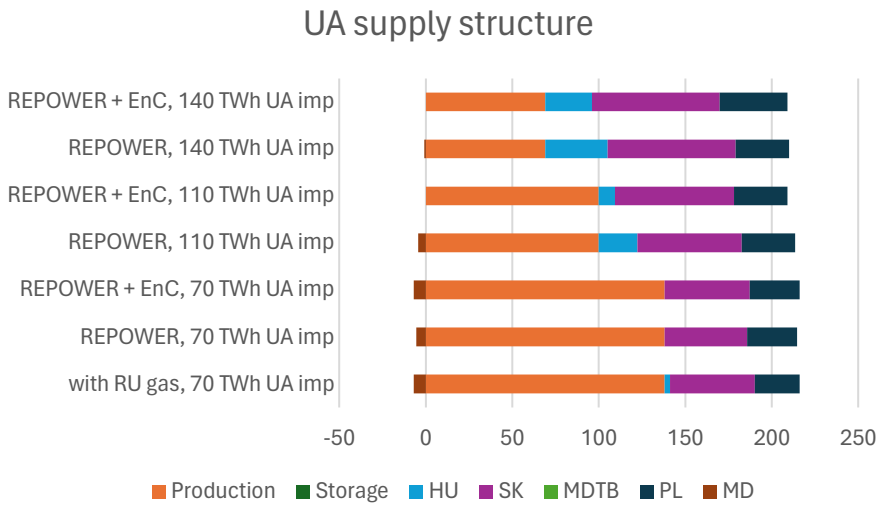


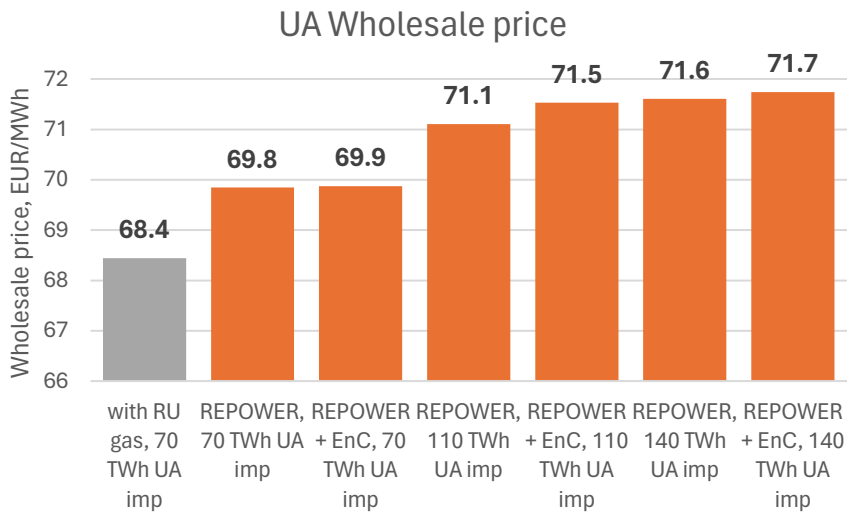
Supply structure change to Repower + EnC and 140 TWh UA import need

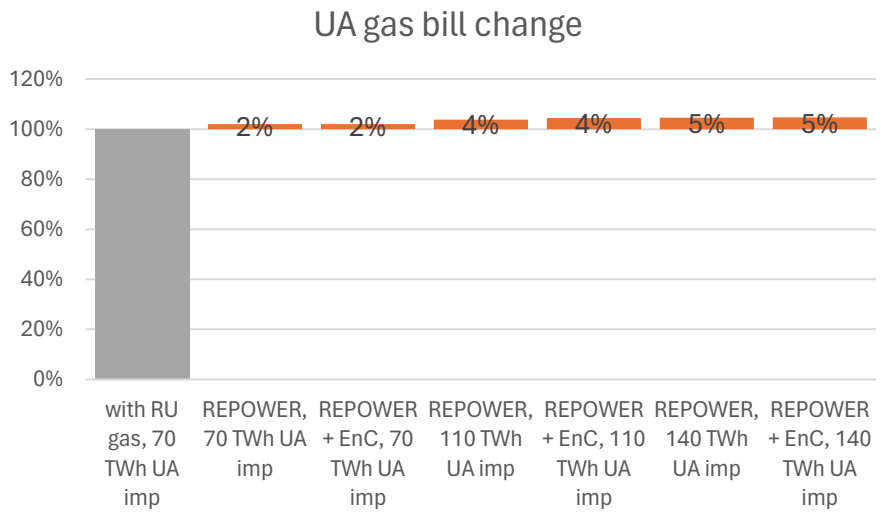
JKM=70 EUR/MWh

UA results





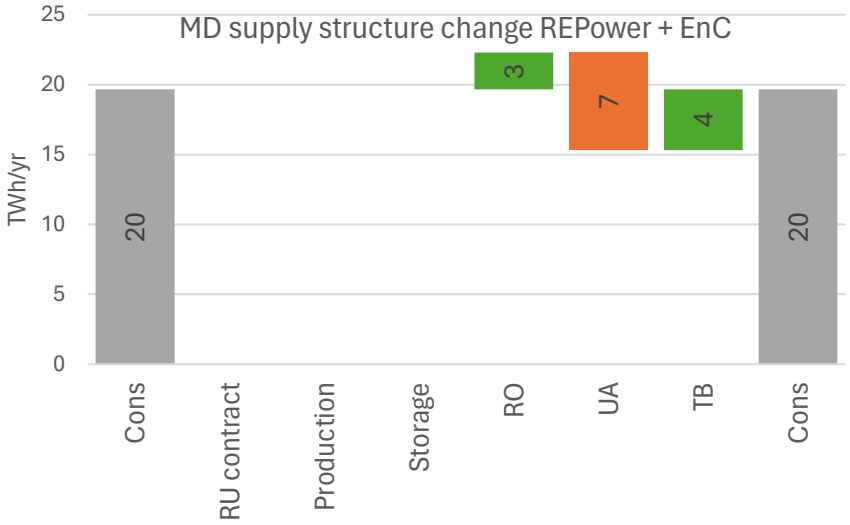


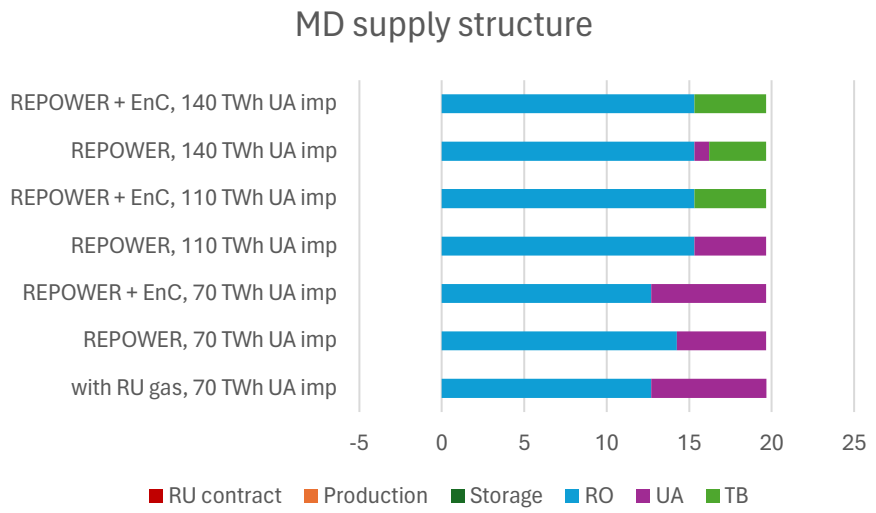


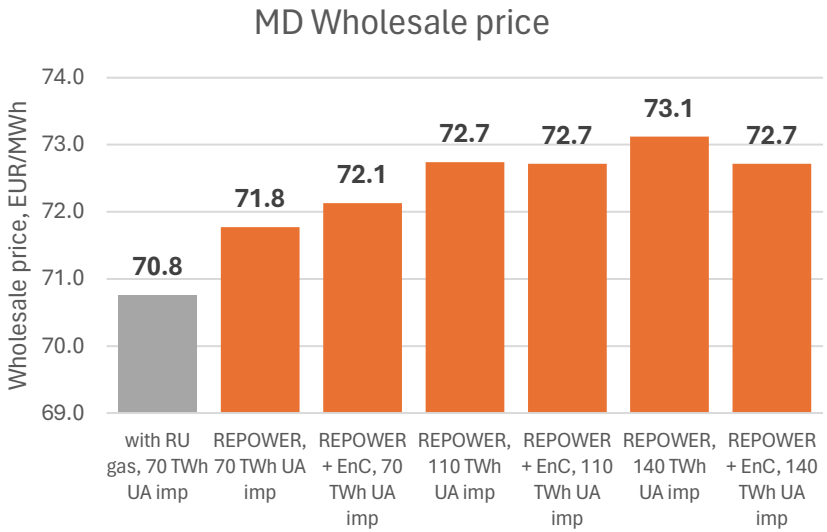
Supply structure change to REPowerEU + EnC and 140 TWh UA import need

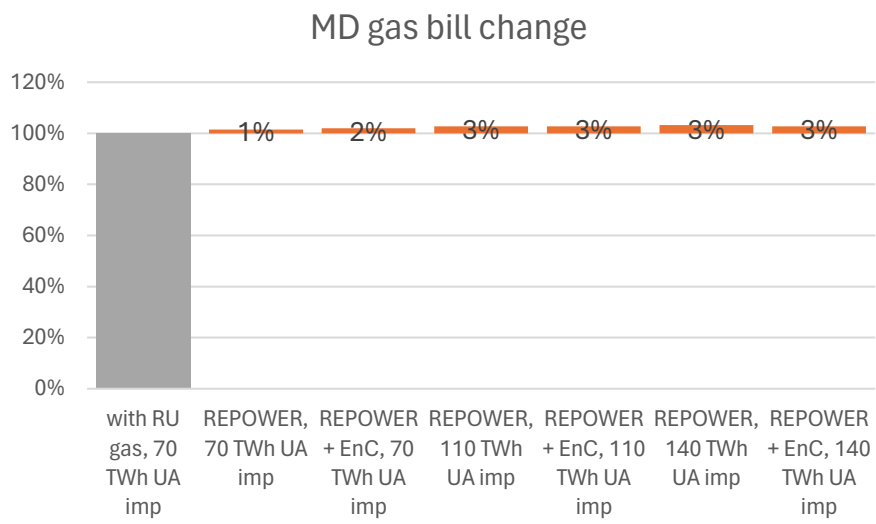
JKM=70 EUR/MWh

MD results





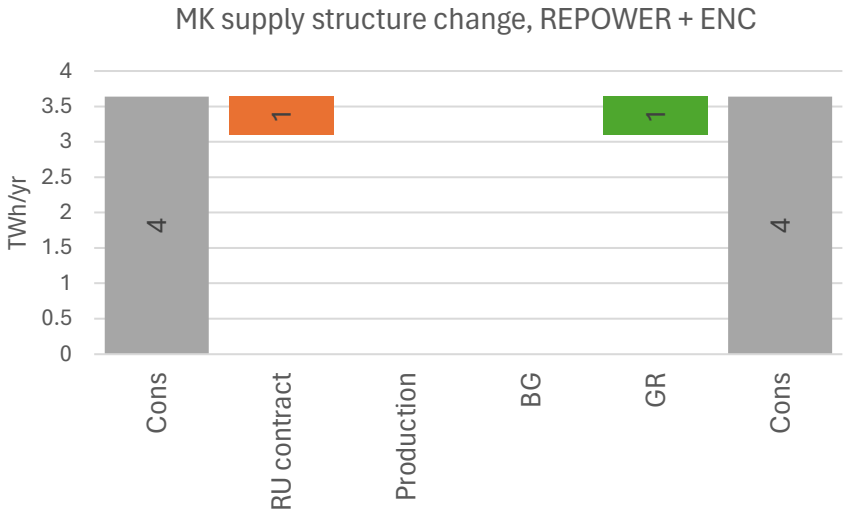


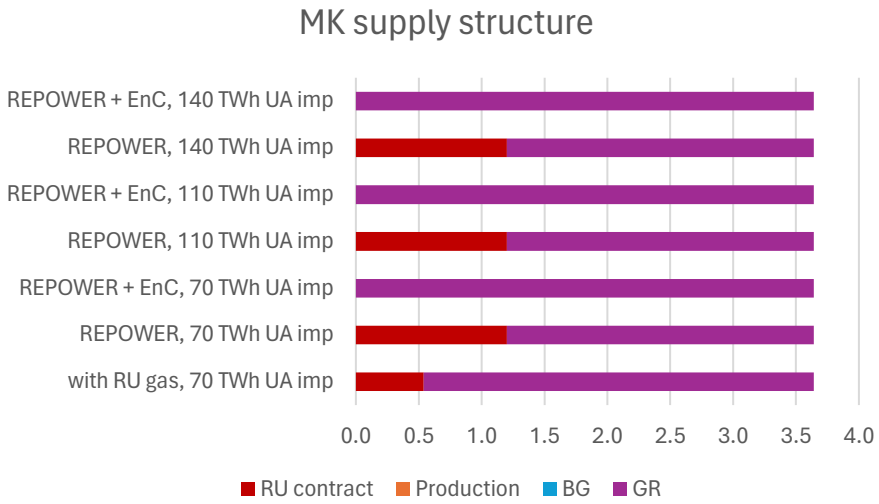


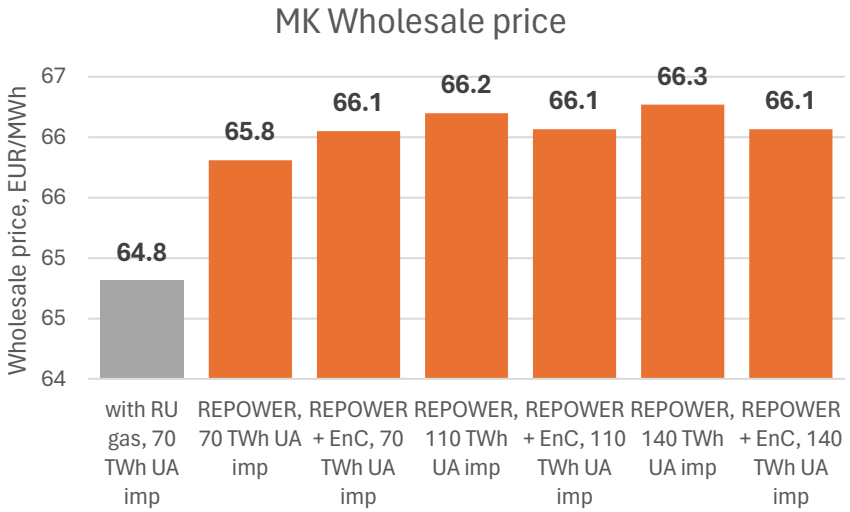
Supply structure change to Repower + EnC and 140 TWh UA import need

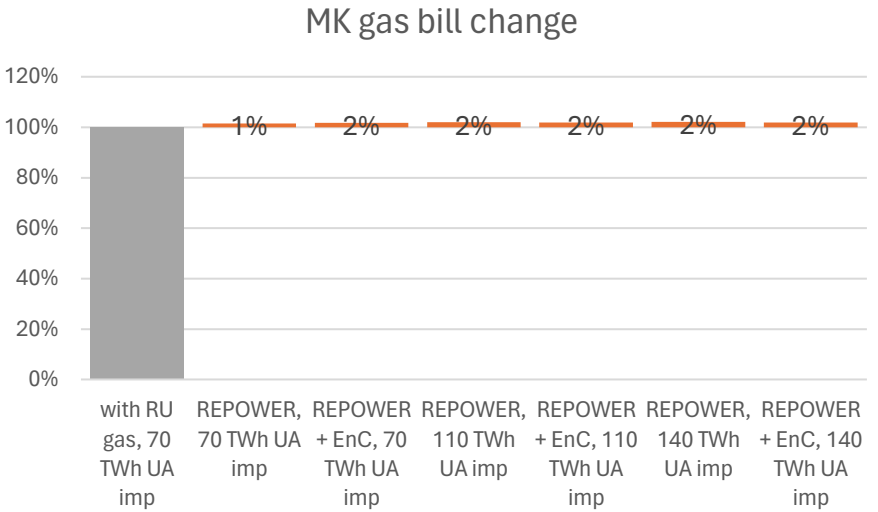
JKM=70 EUR/MWh

MK results









Supply structure change to REPowerEU + EnC and 140 TWh UA import need