

2024 draft gas consumption and LNG forecasts

2023 FRG Meeting
15 November

Energy.Forecasting@aemo.com.au



Purpose and agenda

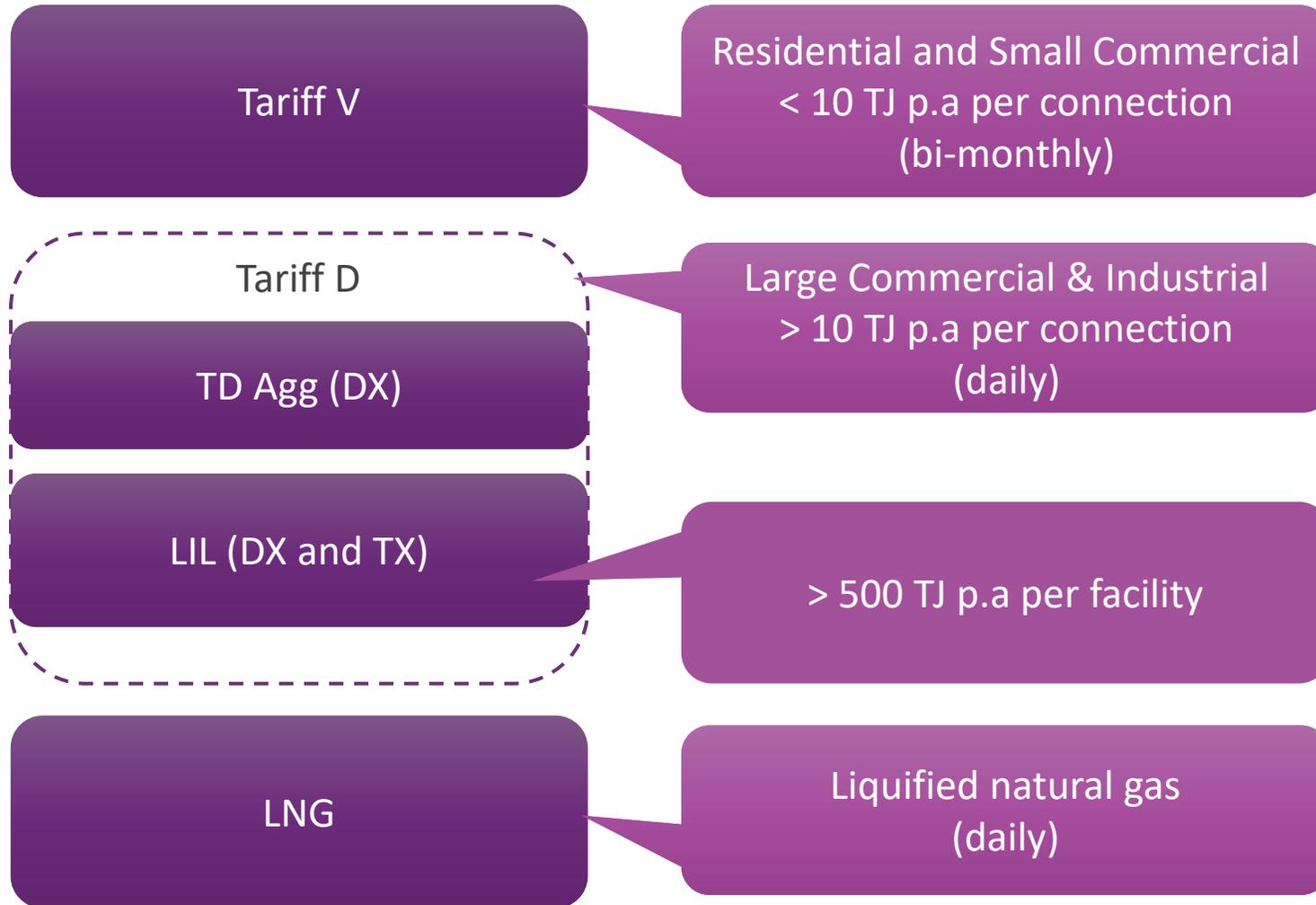
The purpose of this presentation is to *consult* with the FRG on draft gas consumption forecasts for use in the 2024 Gas Statement of Opportunities (GSOO)

Today's agenda includes:

- GSOO 2024 scenario overview
- Key changes and updates
- Decarbonisation drivers
- Draft consumption outlook
- Liquefied Natural Gas (LNG) consumption forecast
- Discussion

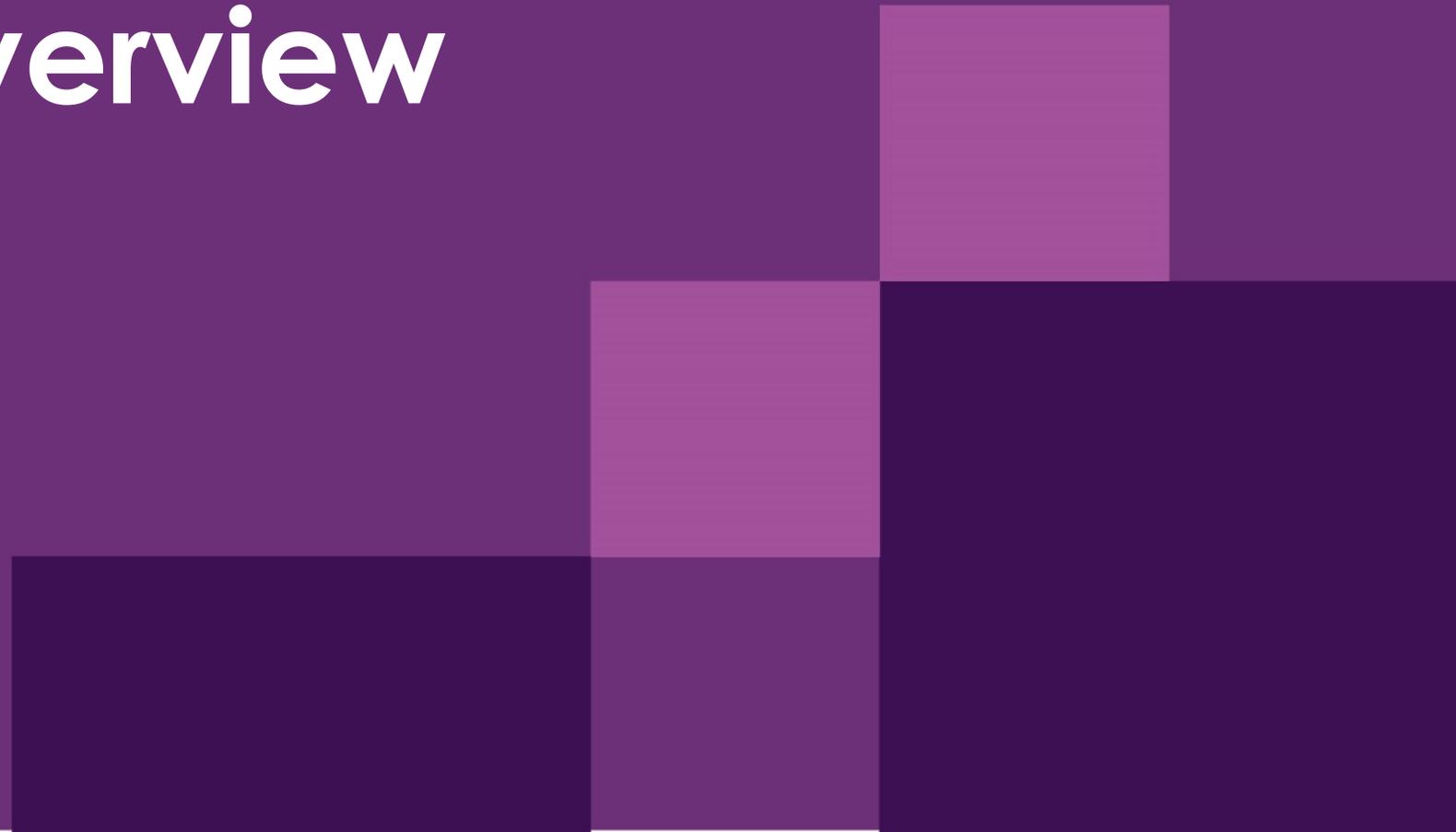
Timing	Relevant topic	Responsible
Nov 22	Draft 2023 gas consumption forecasts	AEMO, FRG
Dec 22 – Feb 23	Draft 2023 IASR consultation	AEMO, Stakeholders
Jul 23	2023 Inputs Assumptions and Scenarios Report published	AEMO
Today	Draft 2024 gas consumption forecasts	AEMO, FRG
29 Nov 23	Draft demand and peak day Forecasts	AEMO, FRG
March 2024	2024 GSOO released	AEMO

Recap on gas forecasting components



Abbreviations:
 LIL: Large industrial load
 TD Agg: remaining 'aggregated' TD load
 DX: Distribution-connected
 TX: Transmission-connected

Scenario overview



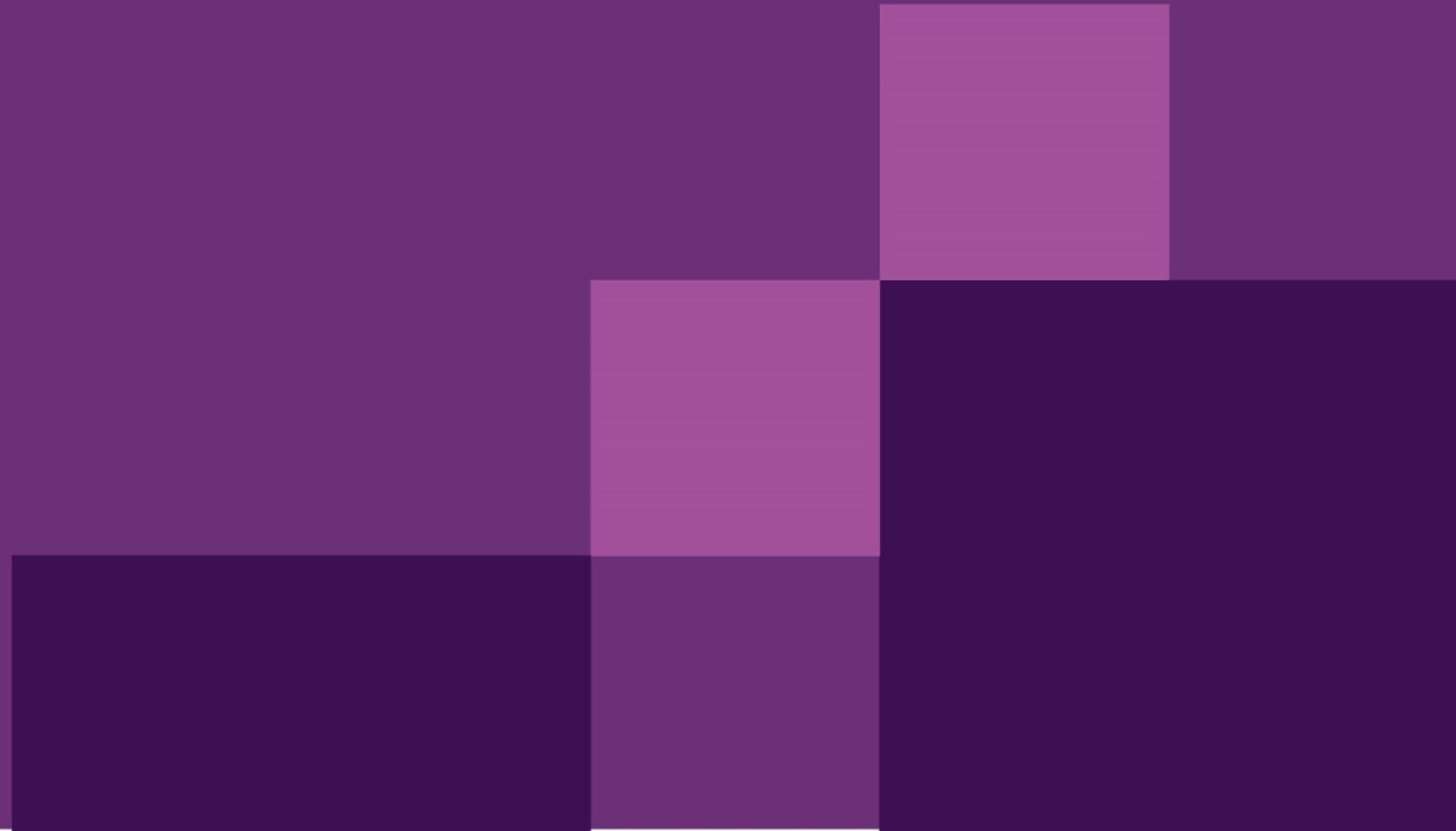
2024 GSOO scenario overview

Driver	Progressive Change	Step Change	Green Energy Exports
Theme	Challenging economic conditions and supply chain disruptions	Strong consumer uptake of consumer energy resources	Development of a green energy export economy
Economic growth	Slower growth	Moderate growth	High growth
Energy efficiency	Lower	Moderate	Higher
Electrification (excl. EV)	Moderate	High	Very high
Hydrogen adoption	Allowed Up to 10% by volume hydrogen blending in gas distribution network	Allowed Up to 10% by volume hydrogen blending in gas distribution network	Faster cost reduction. High production for domestic and export use. Up to 10% by volume hydrogen blending in gas distribution network
Biomethane	Allowed	Allowed	Allowed
*Representative concentration pathway (RCP)	RCP 4.5 (around 2.6°C temperature rise by the end of the century)	RCP 2.6 (consistent with limiting temperature rise to < 2°C)	RCP 1.9 (consistent with limiting temperature rise to 1.5°C)

*RCPs are greenhouse gas concentration trajectories adopted by IPCC.

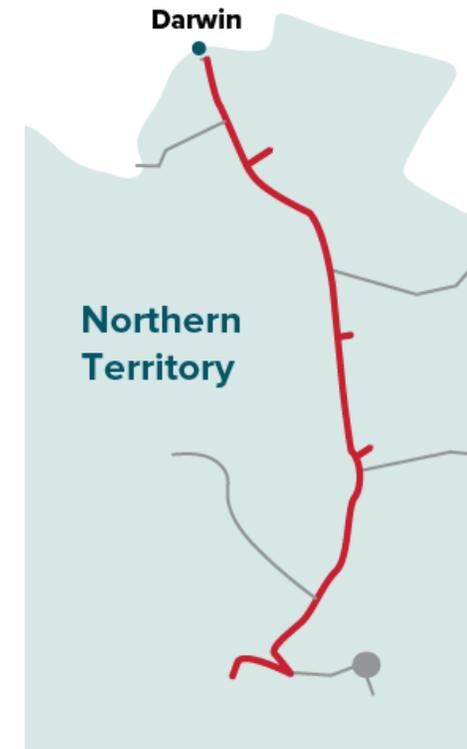


Key changes and updates



Integration of Northern Territory forecasts is complete

- Gas is delivered to consumers via APA Group's Amadeus Gas Pipeline. The pipeline is bi-directional and extends 1,658 km from Alice Springs to Darwin.
- NT Tariff V & Tariff D forecasts¹ are driven by a small number of mining LILs with a minor contribution from Residential and Small Commercial customers.
- Darwin households are not on reticulated gas and make use of gas bottles as required.



Sourced from APA²

[1] NT's gas demand is predominantly from gas power generation. The focus of this FRG will be on Tariff V & D forecasts.

[2] See <https://www.apa.com.au/our-services/gas-transmission/central-region-pipelines/amadeus-gas-pipeline/>

Changes to model inputs

Tariff V inputs

- **Connections**
- **Distribution surveys**
- **Retail price**
- **Energy efficiency**
- **Temperature and Heating Degree Days**
- Electrification
- Hydrogen
- Biomethane

Tariff D inputs

TD Aggregated

- **GSP & Population**
- **Retail price**
- **Energy efficiency**
- Electrification
- Hydrogen
- Biomethane

LIL

- LIL surveys
- Electrification
- Hydrogen
- Biomethane

Components highlighted in **red bold** are final. All other components are being finalised.

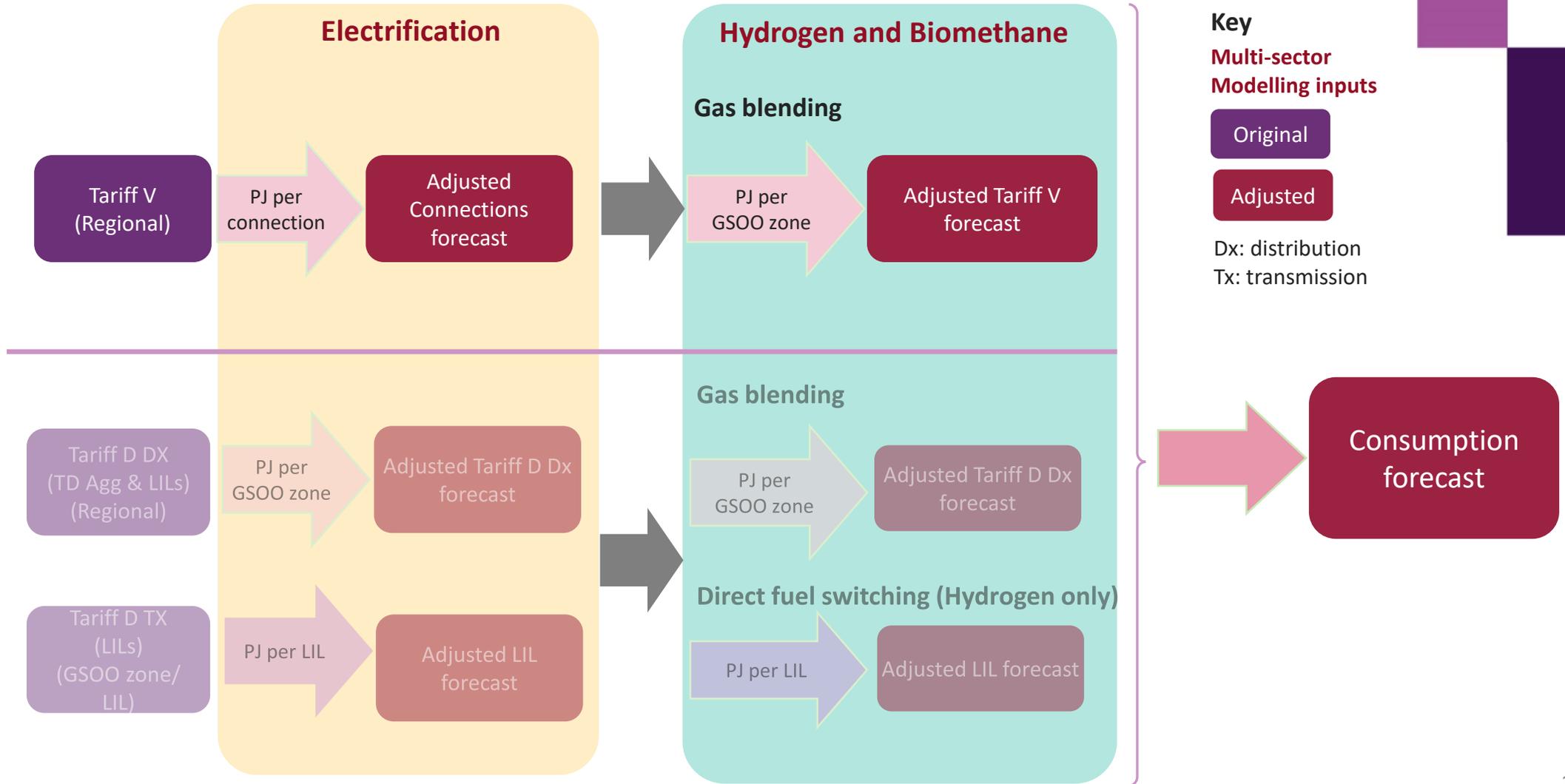
Decarbonisation drivers in the natural gas consumption forecasts



Decarbonisation drivers in gas consumption models

Tariff V

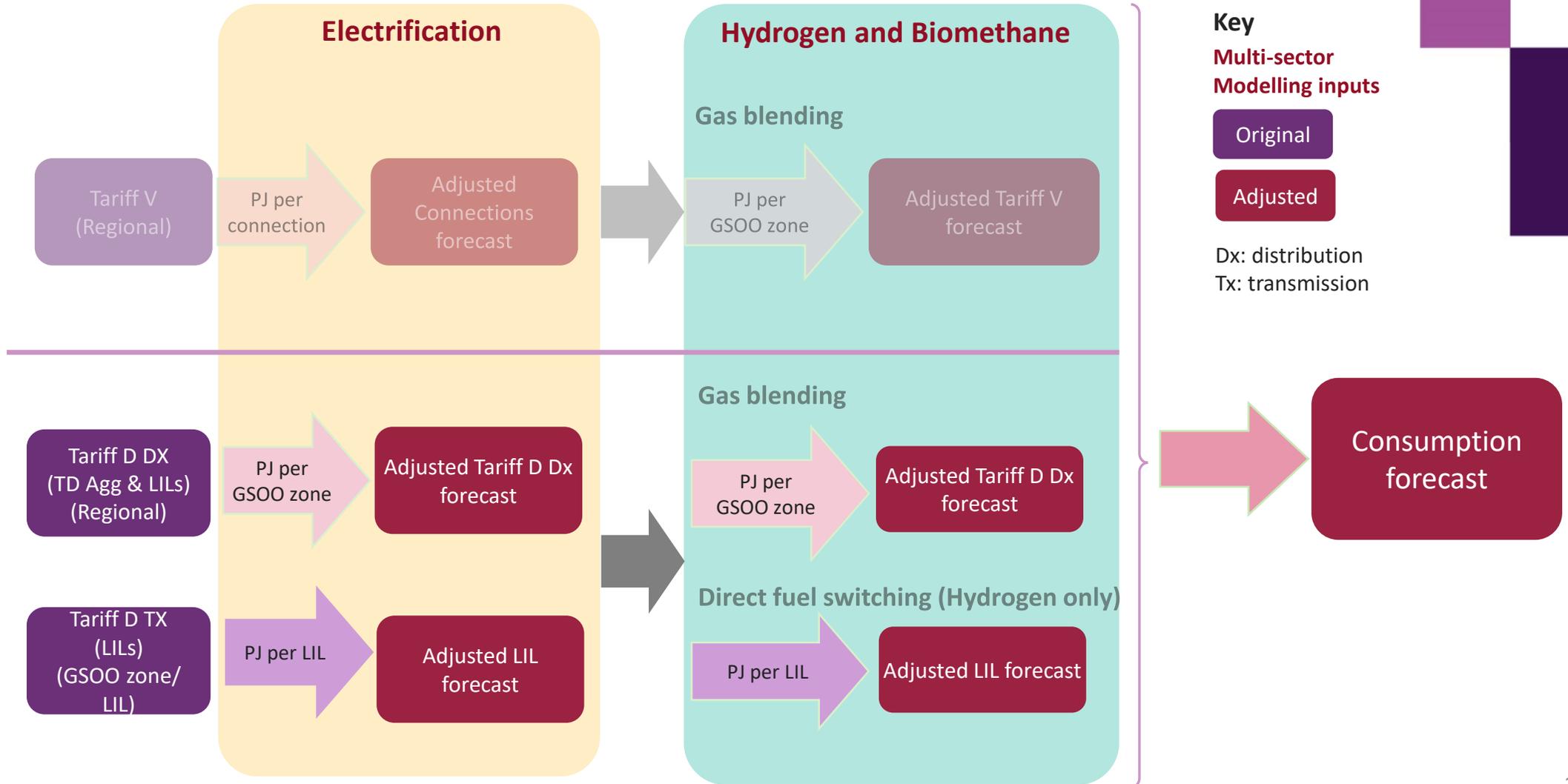
Tariff D



Decarbonisation drivers in gas consumption models

Tariff V

Tariff D

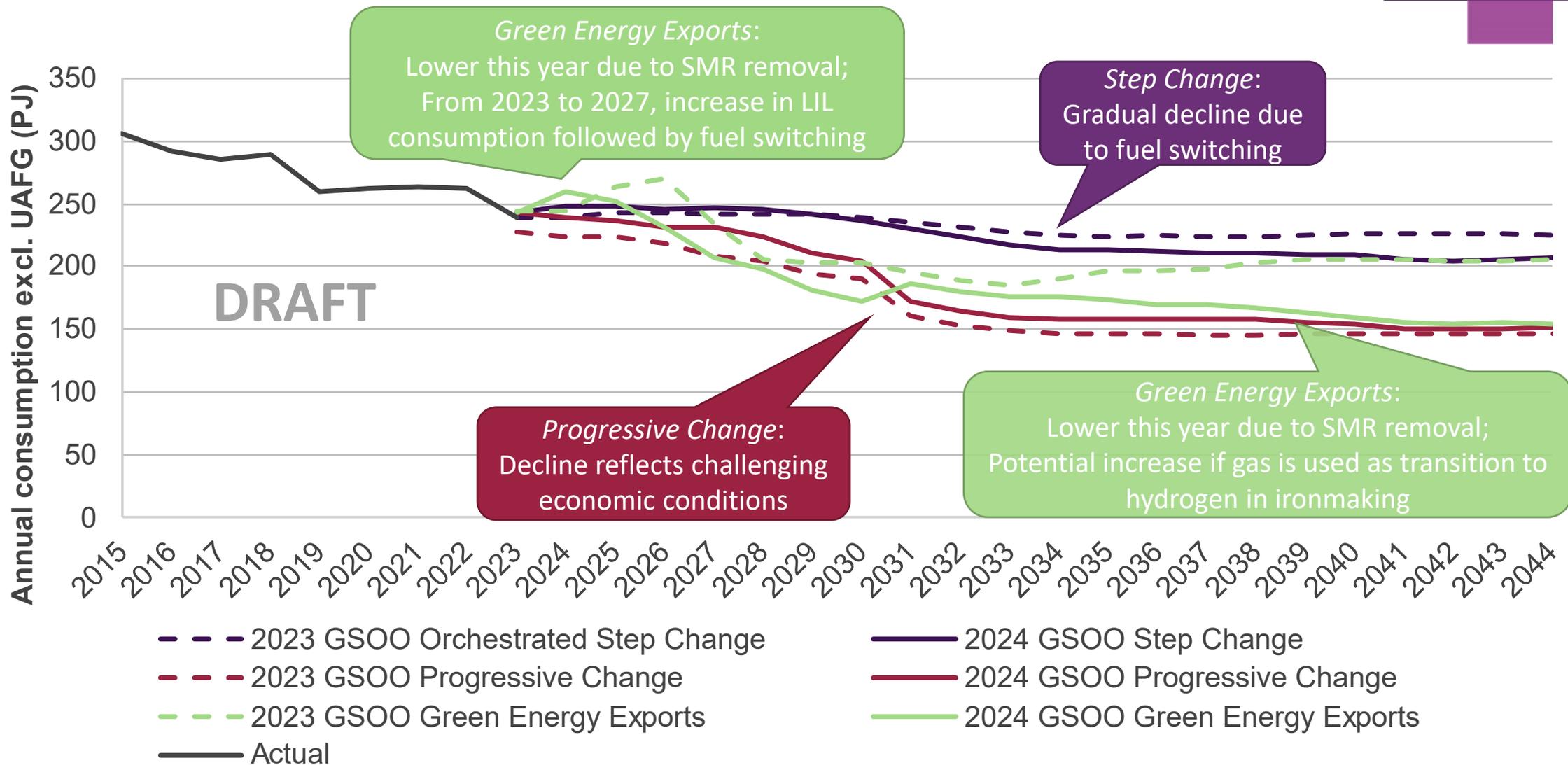


Draft consumption forecasts

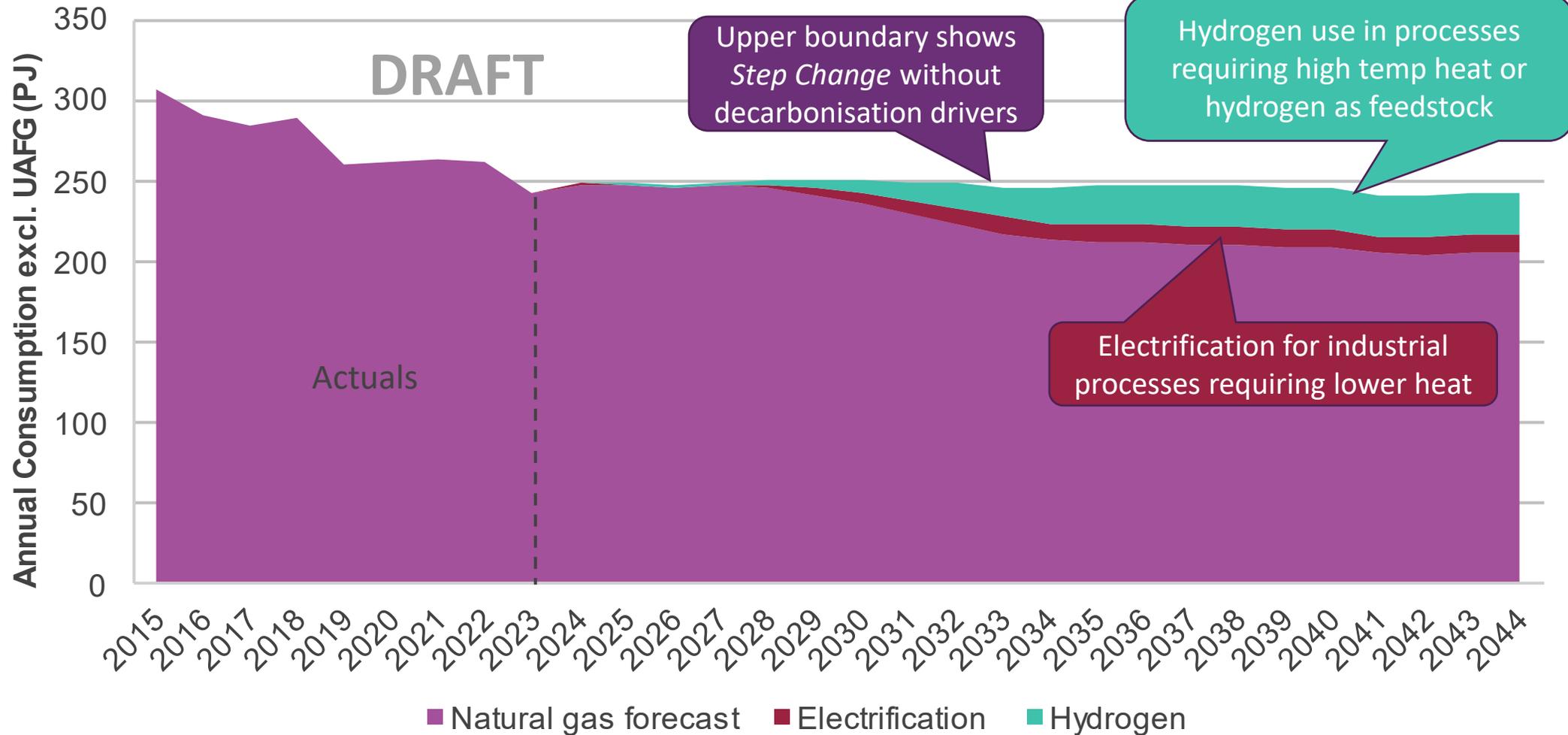


Large Commercial and Industrial (Tariff D)

Tariff D: decarbonisation driving decreasing gas use



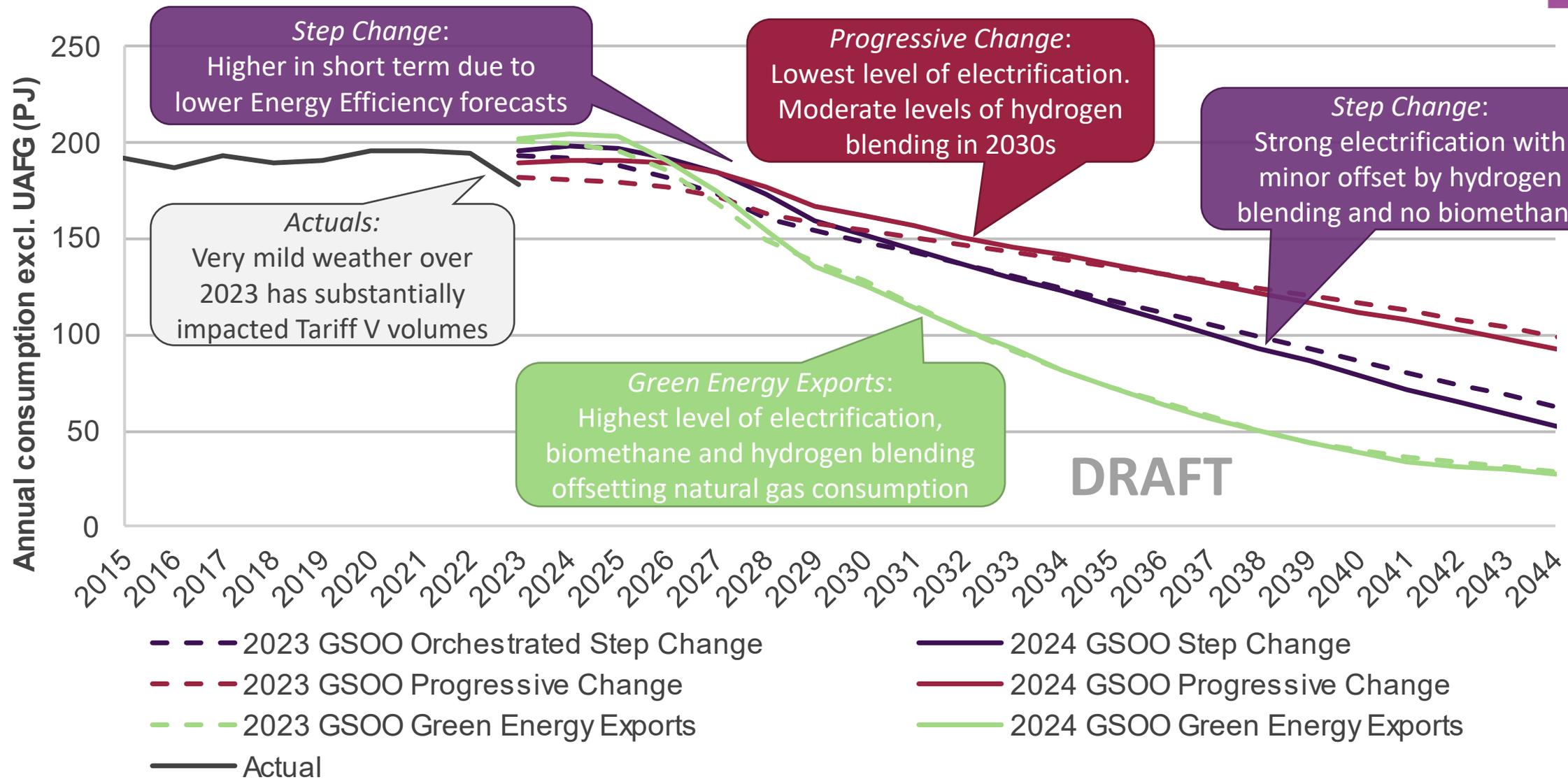
Tariff D (Step Change)



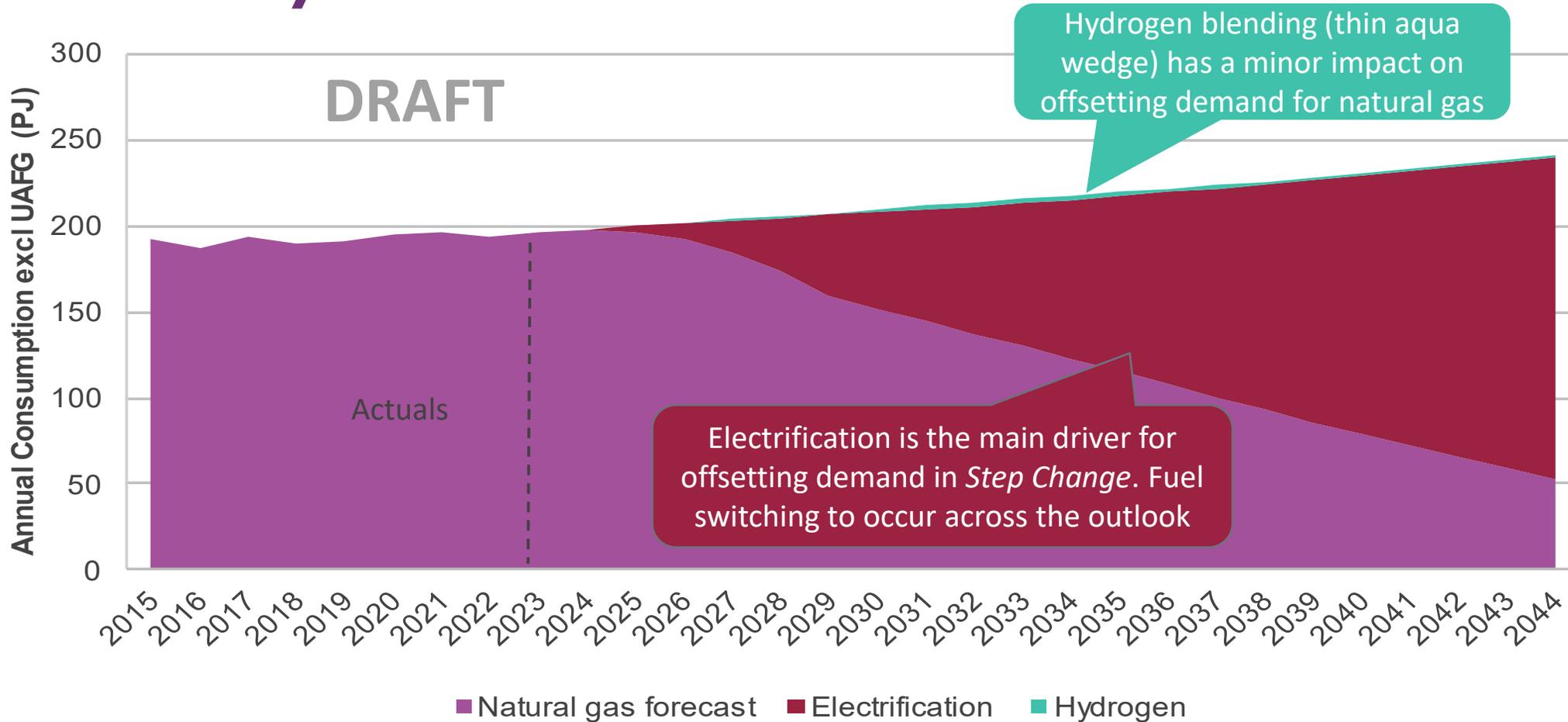
Draft consumption forecasts Residential & Commercial

Residential and Commercial (Tariff V)

Tariff V projected to decline due to decarbonisation



Tariff V (Step Change) demand is largely offset by electrification



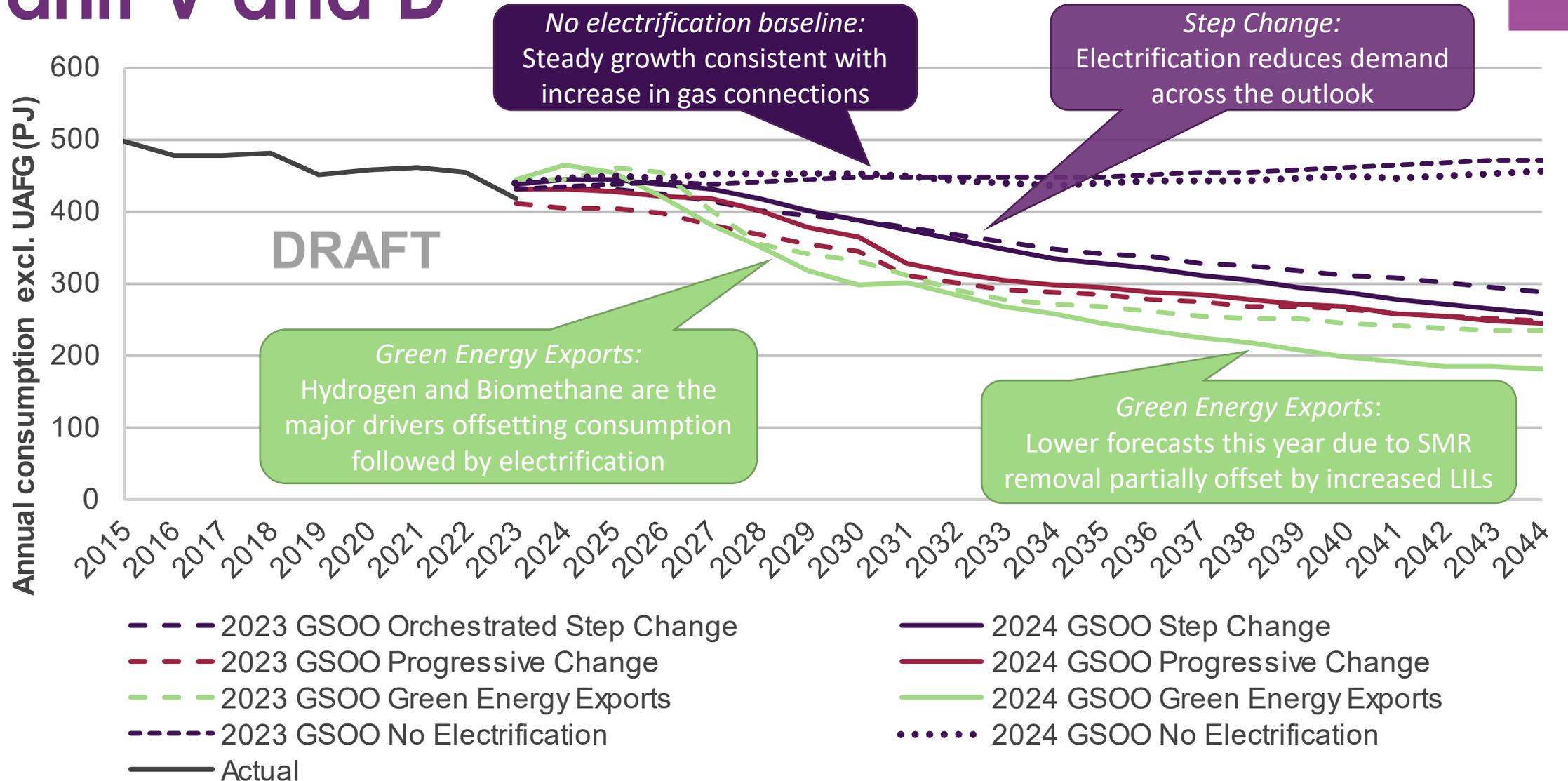
Note: AEMO considers that the existing electrification forecast adequately accounts for the increased fuel-switching arising from the Victorian Government's ban on new residential gas connections from 2024.

Draft consumption forecasts

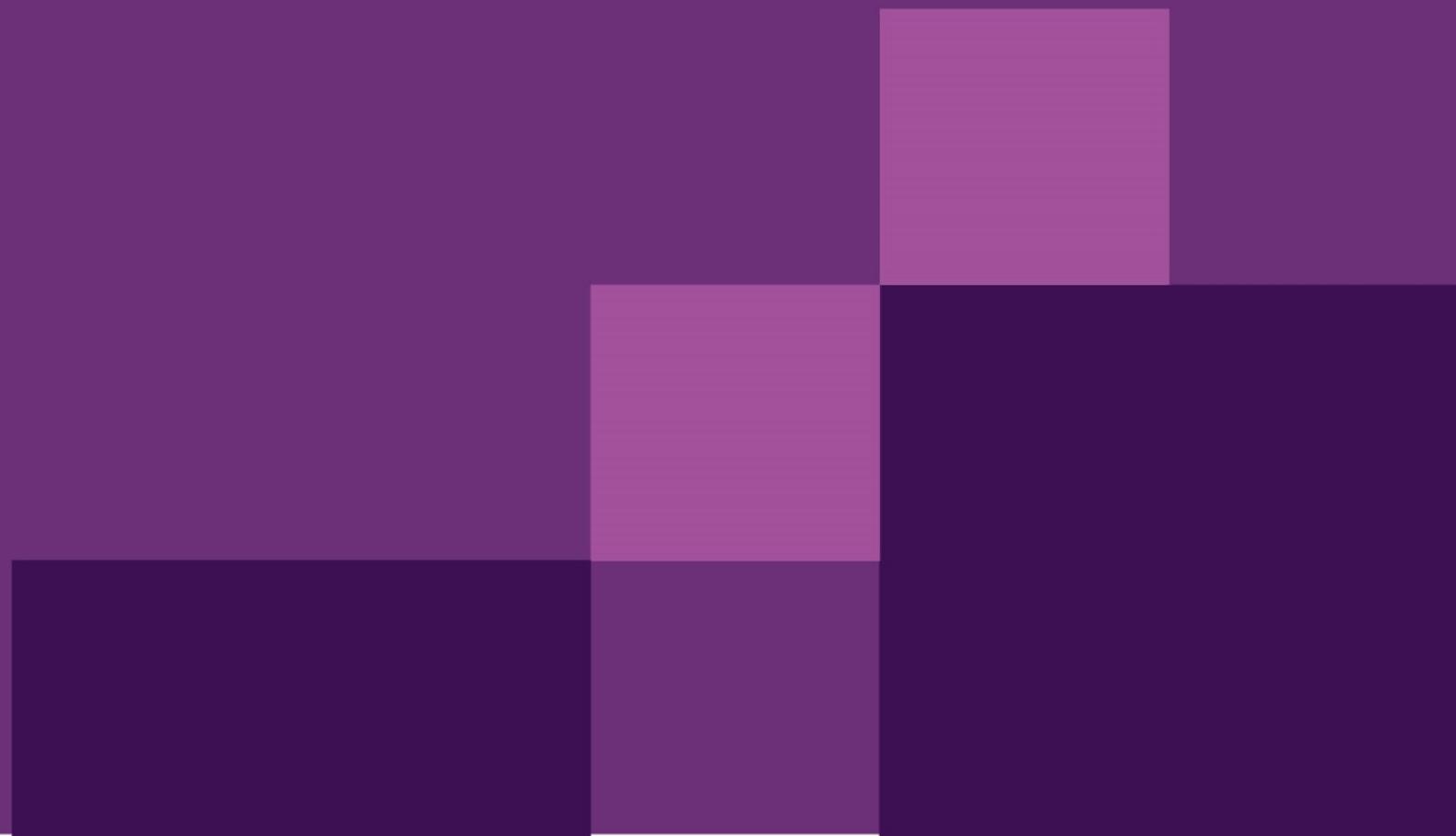
Aggregated Forecast

Aggregation of
Residential and Commercial (Tariff V)
Large Commercial and Industrial (Tariff D)

Aggregated Forecast Tariff V and D



LNG annual consumption forecasts



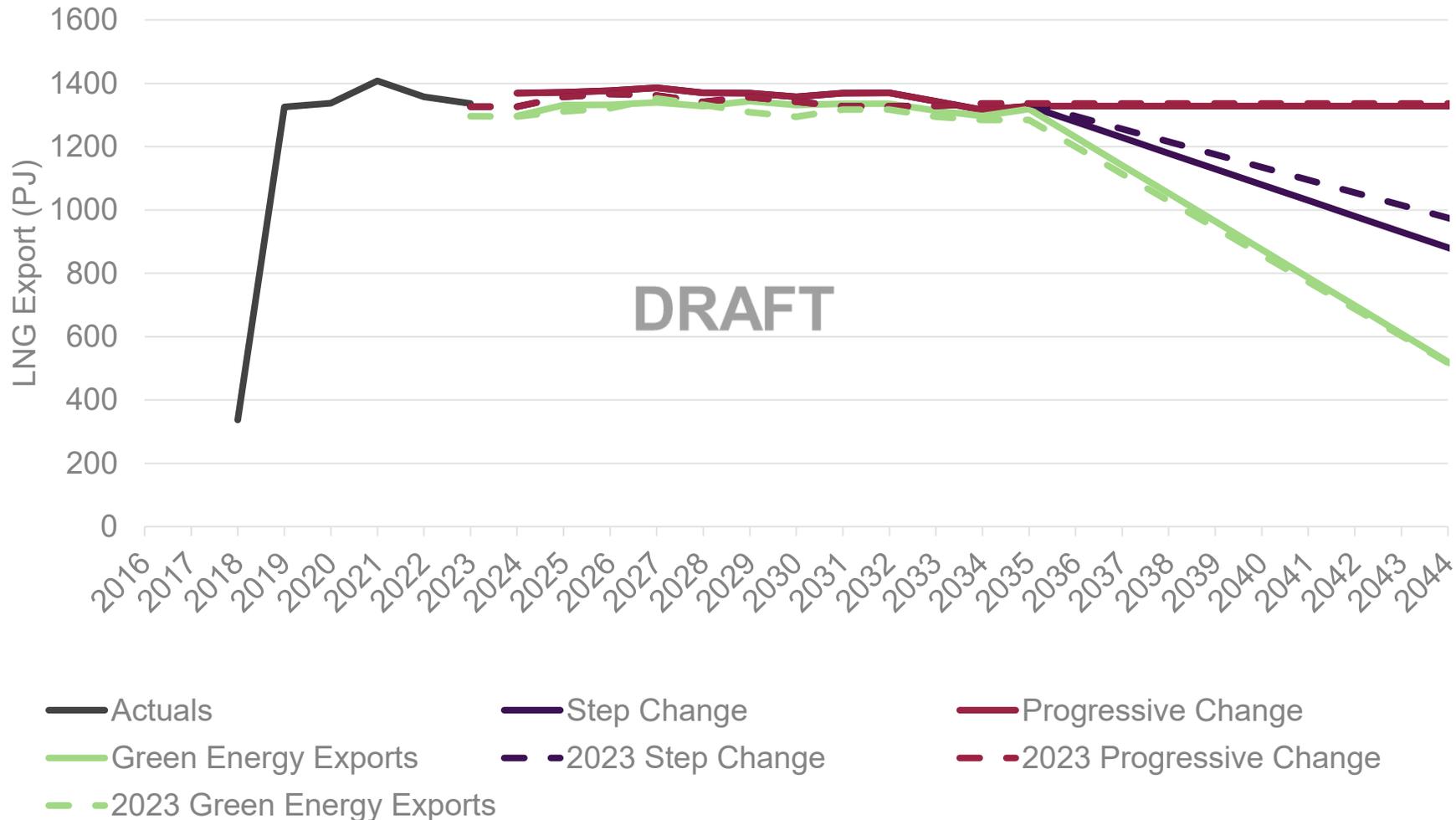
The methodology for forecasting LNG exports is unchanged from last year

- AEMO’s LNG forecasts combine:
 - Survey results from LNG consortia; and
 - AEMO’s view of long-term LNG export demand, consistent with scenario narratives
- AEMO’s long-term view of LNG exports is aligned with expected exports in 2050 in the IEA’s World Energy Outlook (WEO).

IASR scenario	Progressive Change	Step Change	Green Energy Exports
WEO Scenario	STEPS	SDS	NZE
Treatment/Assumption for long-term exports	None	Half-way between APS and NZE	Adjusted to account for participant data and expected rate of decline of export volumes

- LNG forecasts have been updated for new survey data and the 2023 WEO

2024 GSOO LNG export forecast is similar to the 2023 GSOO



- Forecasts to 2035 are slightly higher than the 2023 GSOO
- Beyond 2035, forecasts are very similar, except for Step Change, driven by a change in WEO outcomes

Discussion

Type your question in the chat, or raise your hand





For more information visit

aemo.com.au

Energy.forecasting@aemo.com.au