Winter 2020 in Review

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Sli.do: #AEMOwinter2021

Important Notice

Purpose

AEMO has prepared this presentation material to provide information about the operation of the Victorian gas transmission system and the market operational strategies for Winter 2021, as at the date of publication.

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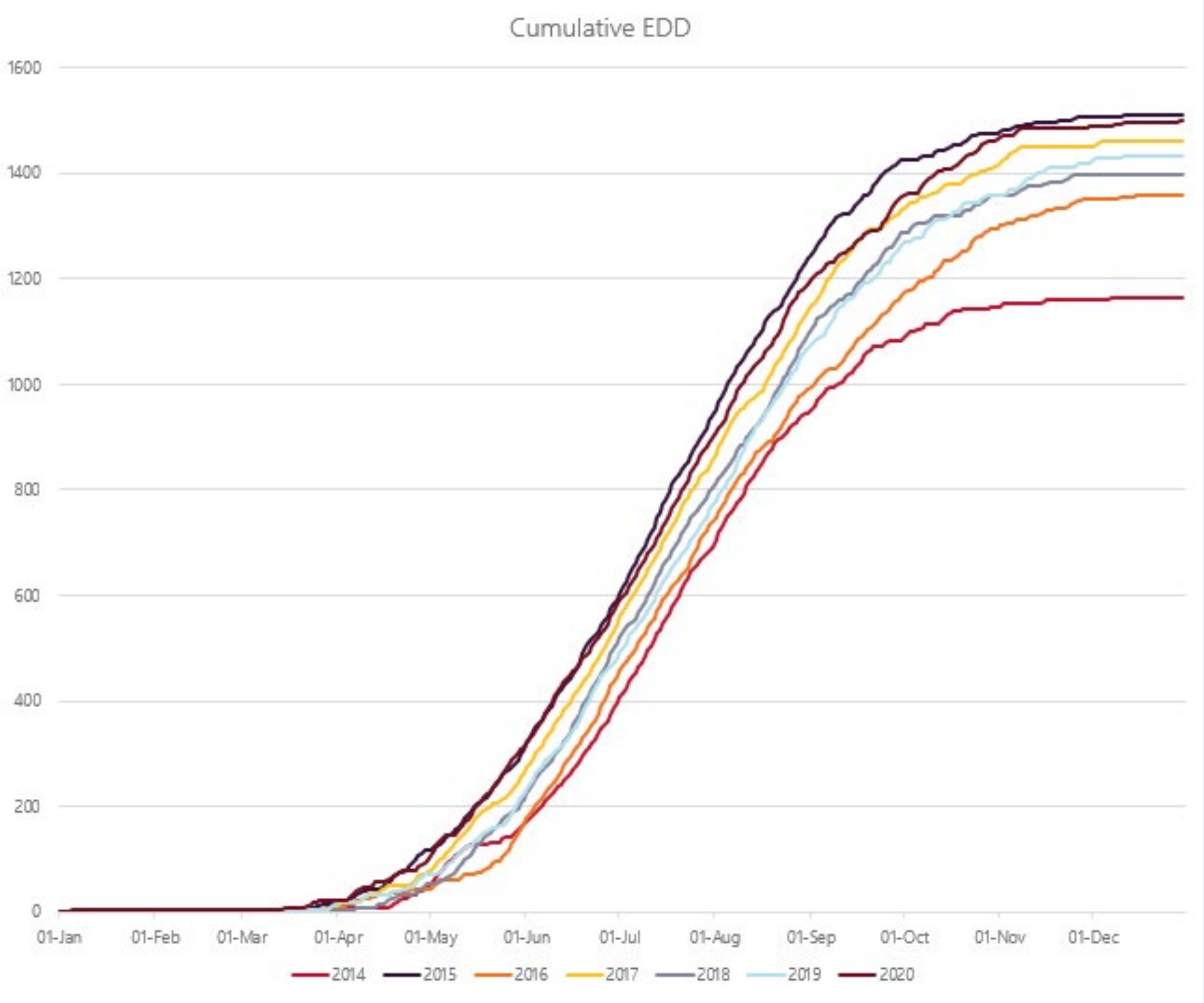
Review of winter 2020

- How cold was it?
- How much gas did we consume?
- How much gas-powered generation (GPG) did we use?
- How high were the demand peaks?
- Where did the gas come from?
- What happened to storage levels?

How cold was it?

- Cumulative EDD similar to 2015
- 2015 was the coldest winter for 26 years



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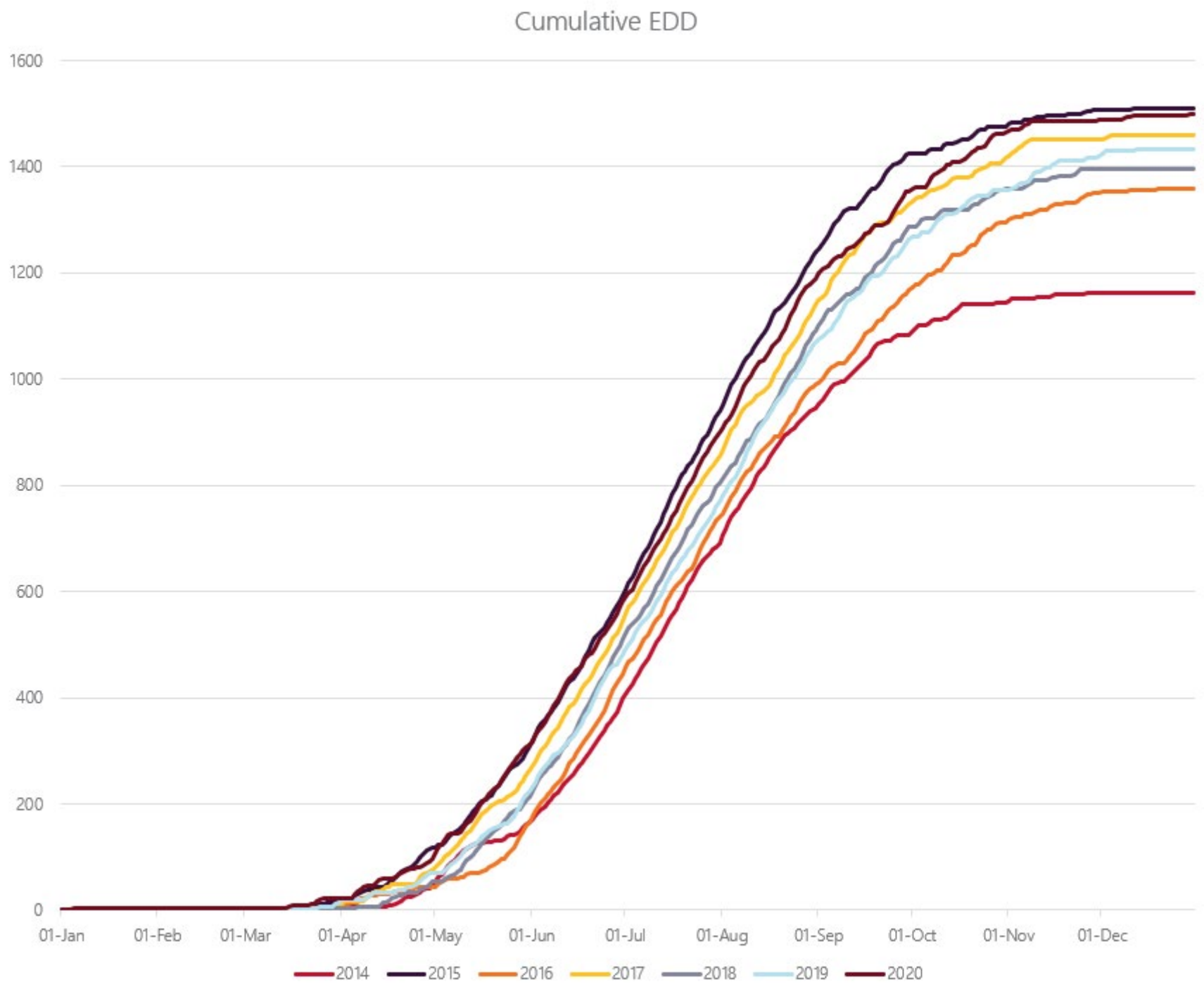

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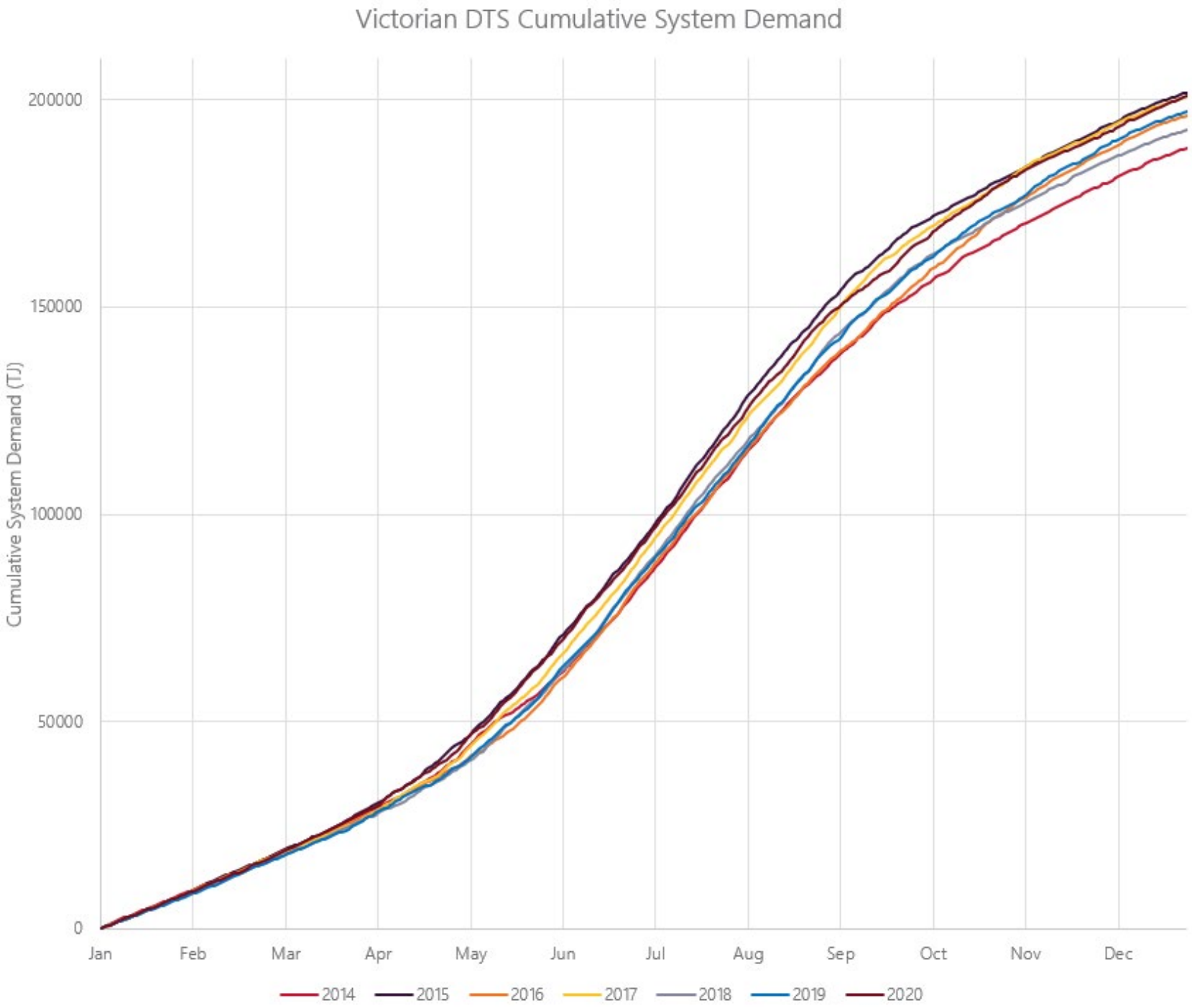
Gas consumption comparison

- Gas consumption trends similar to EDD trend
- 2015, 2017 & 2020 all similar consumption



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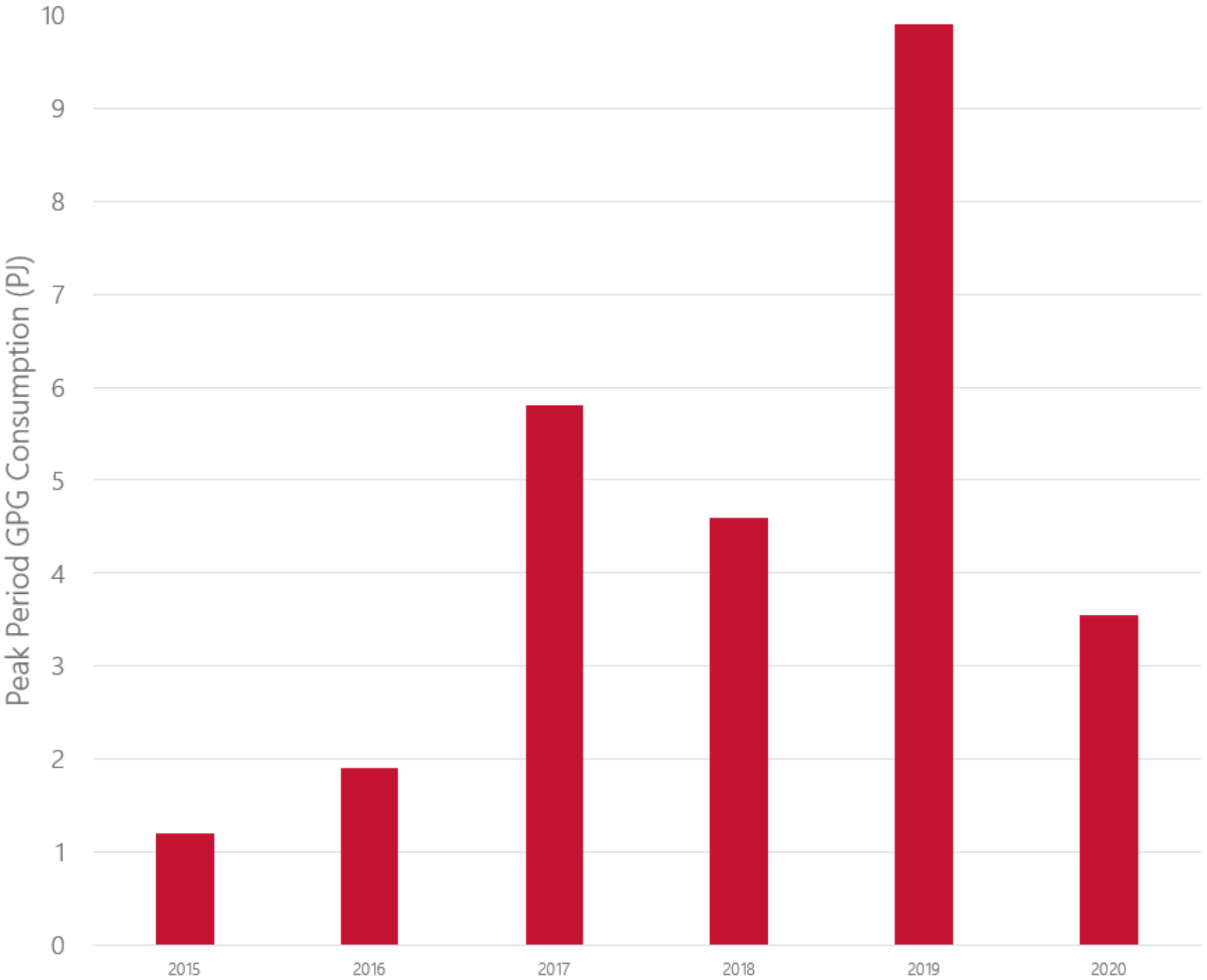
Victorian DWGM gas-powered generation

- GPG during peak period (1 May – 30 September) reduced compared to the previous three years
- Primarily due to grid-scale variable renewable energy (VRE) generation projects and distributed solar photovoltaics (PV)
- Likelihood of GPG and the average quantity of gas consumed increases for colder weather



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How high were the demand peaks?

- Peak days had much higher system demand than 2018 & 2019 (and higher EDD)
- 14 days above 1,000 TJ system demand (similar to 2019, but much higher demand than 2018)

2020 Highest Demand Days

Gas Day	EDD	System Demand (TJ)	GPG Demand (TJ)	Total Demand (TJ)
04 Aug 2020	15.3	1,214	**27**	**1,241**
07 Aug 2020	13.2	1,151	14	1,164
22 Aug 2020	14.2	1,124	13	1,136
03 July 2020	12.9	1,112	13	1,126

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How cold were the coldest days?

- 4 August was in the top five highest total demand on record despite low GPG on the day
- Partly due to COVID demand, but also very cold

Highest Demand Days Ever

Gas Day	EDD	System Demand (TJ)	GPG Demand (TJ)	Total Demand (TJ)
09 Aug 2019	15	1199	109	1308
17 Jul 2007	16.8	1258	24	1282
03 Aug 2017	13.4	1139	129	1268
20 Jun 2019	12.8	1088	179	1268
04 Aug 2020	15.3	1214	27	1241
12 Aug 2008	12.1	1072	164	1236

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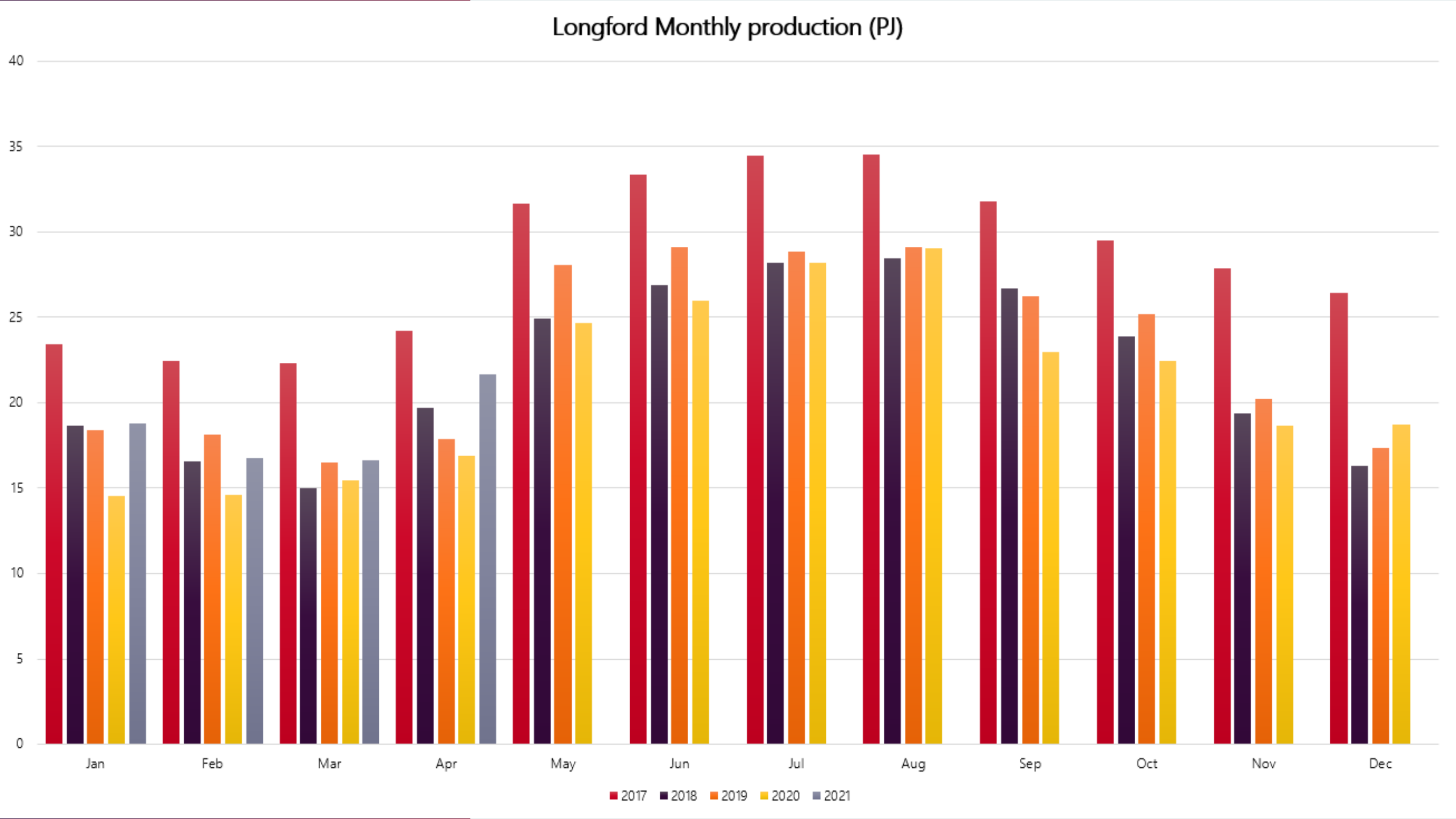
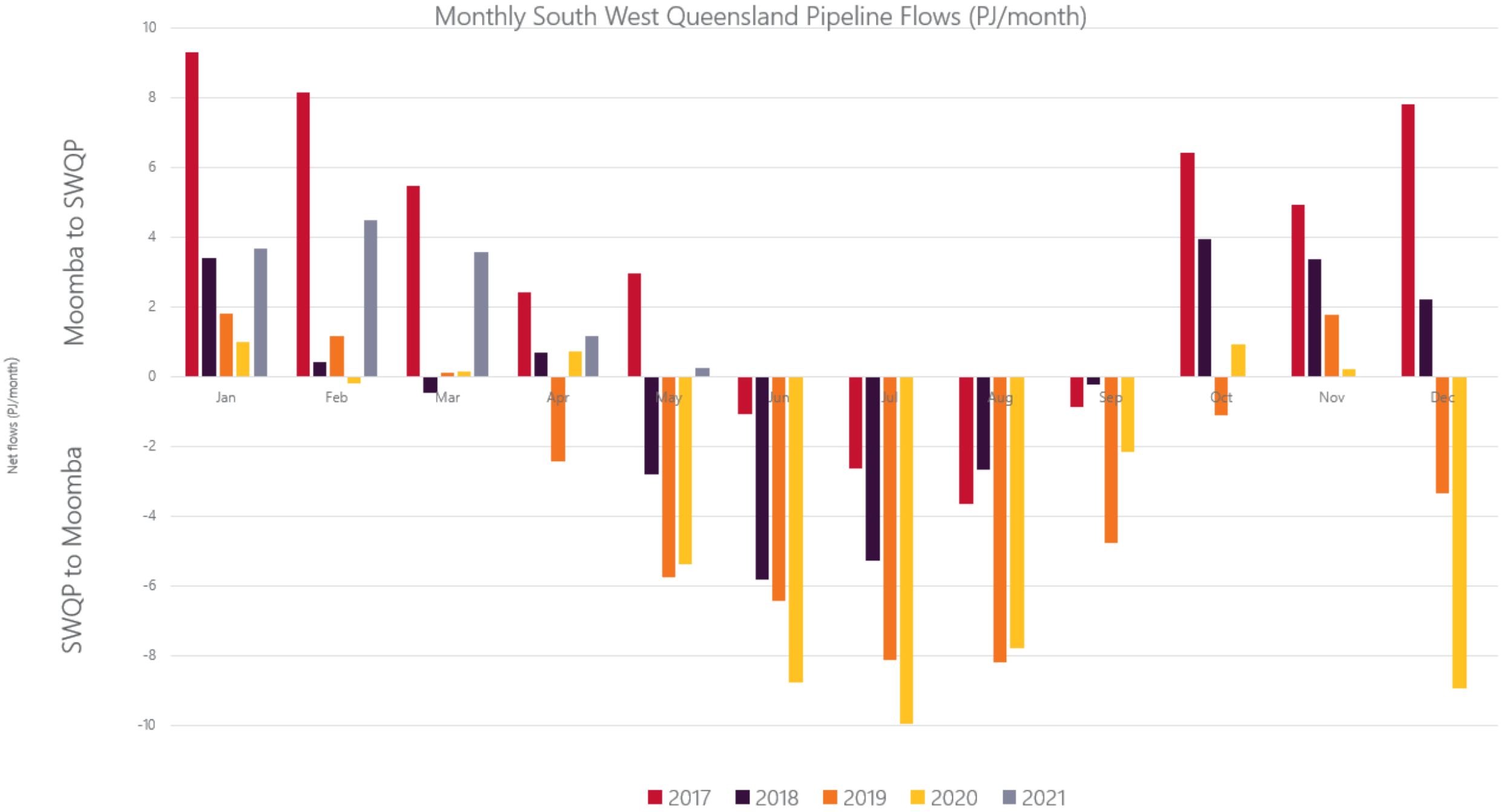
Winter 2020 – more Threats to System Security

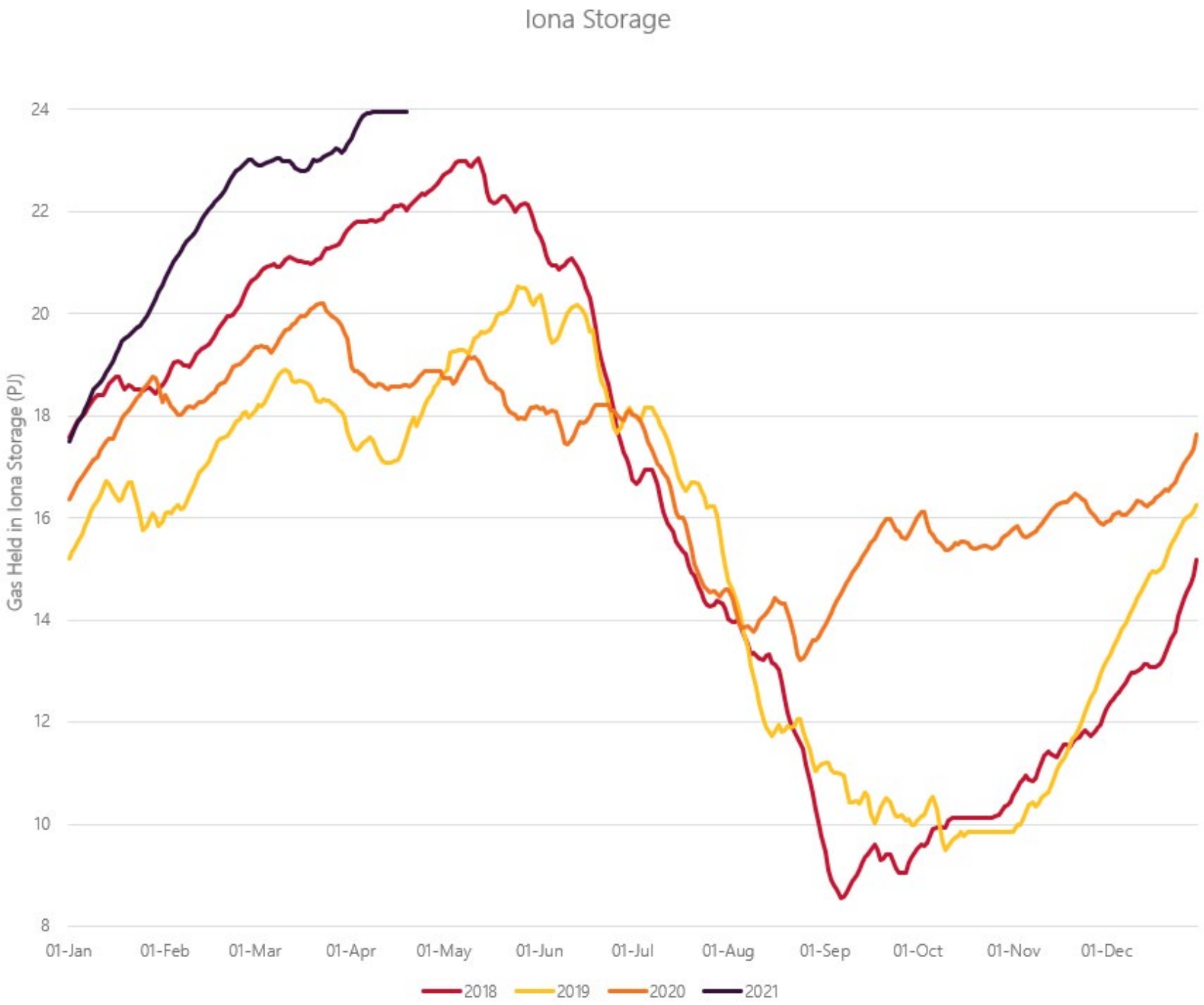
- **1 May –** No TTSS, but COVID-19 Demand Profile → Very low linepack
- **1 June** – TTSS Declared and 34 TJ LNG injected (8 TJ/h)
- **3 June** – TTSS (Request for market response) – No LNG
- **4 August** – TTSS Declared; 35 TJ LNG scheduled (5 TJ/h)
- **7 August** – TTSS and 55 TJ of LNG injected (8 TJ/h from 2pm!)
- **22 August** – TTSS and 20 TJ of LNG injected (5 TJ/h)


Longford Monthly production (PJ)
40
35
30
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2017
2018
2019
2020
2021


Monthly South West Queensland Pipeline Flows (PJ/month)
Moomba to SWQP
SWQP to Moomba
Net flows (PJ/month)
10
8
6
4
2
0
-2
-4
-6
-8
-10
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2017
2018
2019
2020
2021

Iona Underground Gas Storage

- Concerned around June – July last year
- Filling commenced from late August, much lower level of injections through August and September
- Highest storage levels on record



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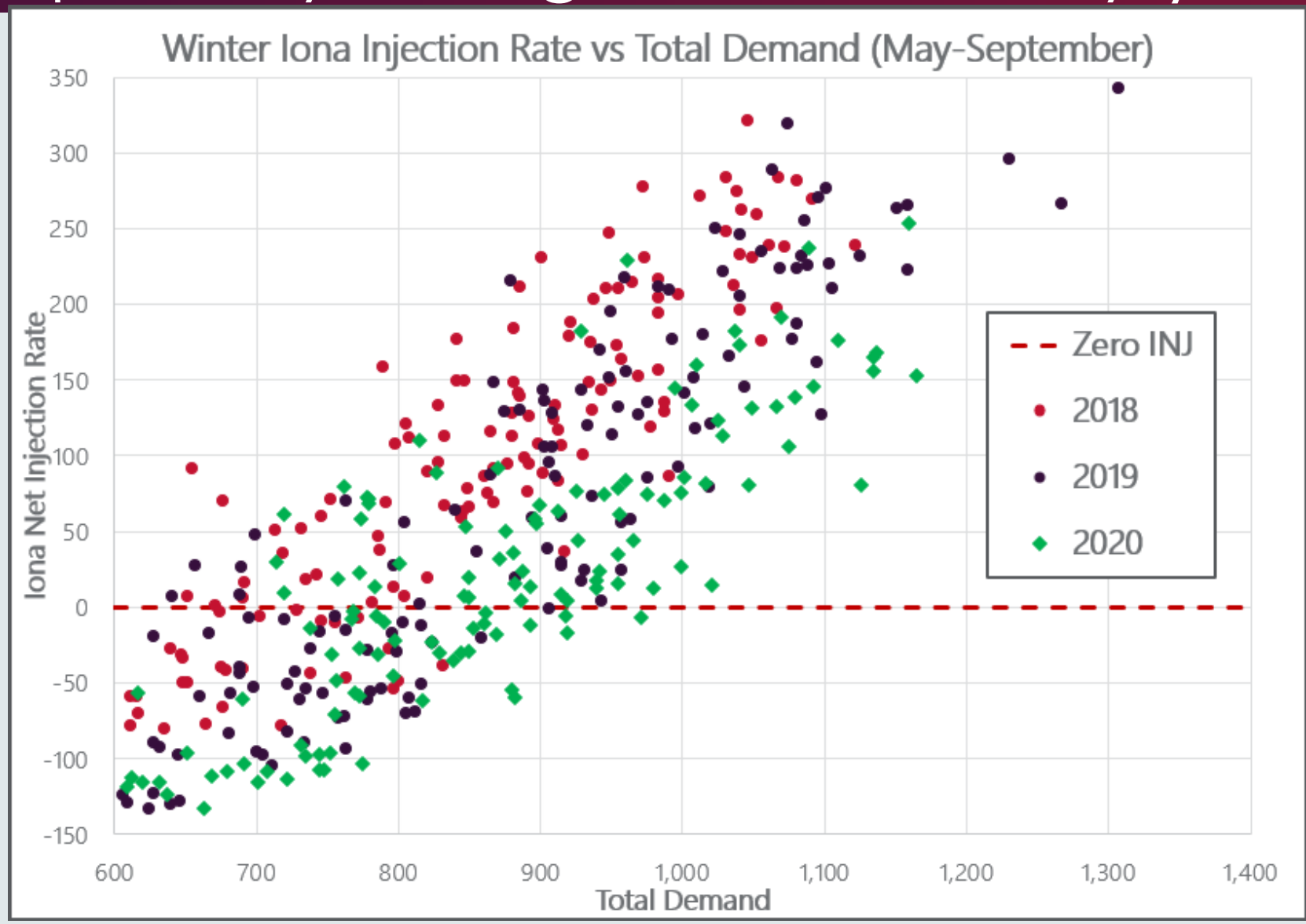
Winter 2020 – Low Iona CPP Injection rates (Especially on high demand days)

- Winter 2020 Iona injection rate lower than usual in general
- Concentration of days with extremely low ratio of Iona injections to total demand
- MP under-forecasting resulting in even lower hourly rates in first half of gas day



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Summary

- Colder than average
- System consumption was above average
- High use of LNG for system security
- Increasing supply from Queensland
- Low injections from the South West

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