WA EV Network Project Update

Sandra GIRY

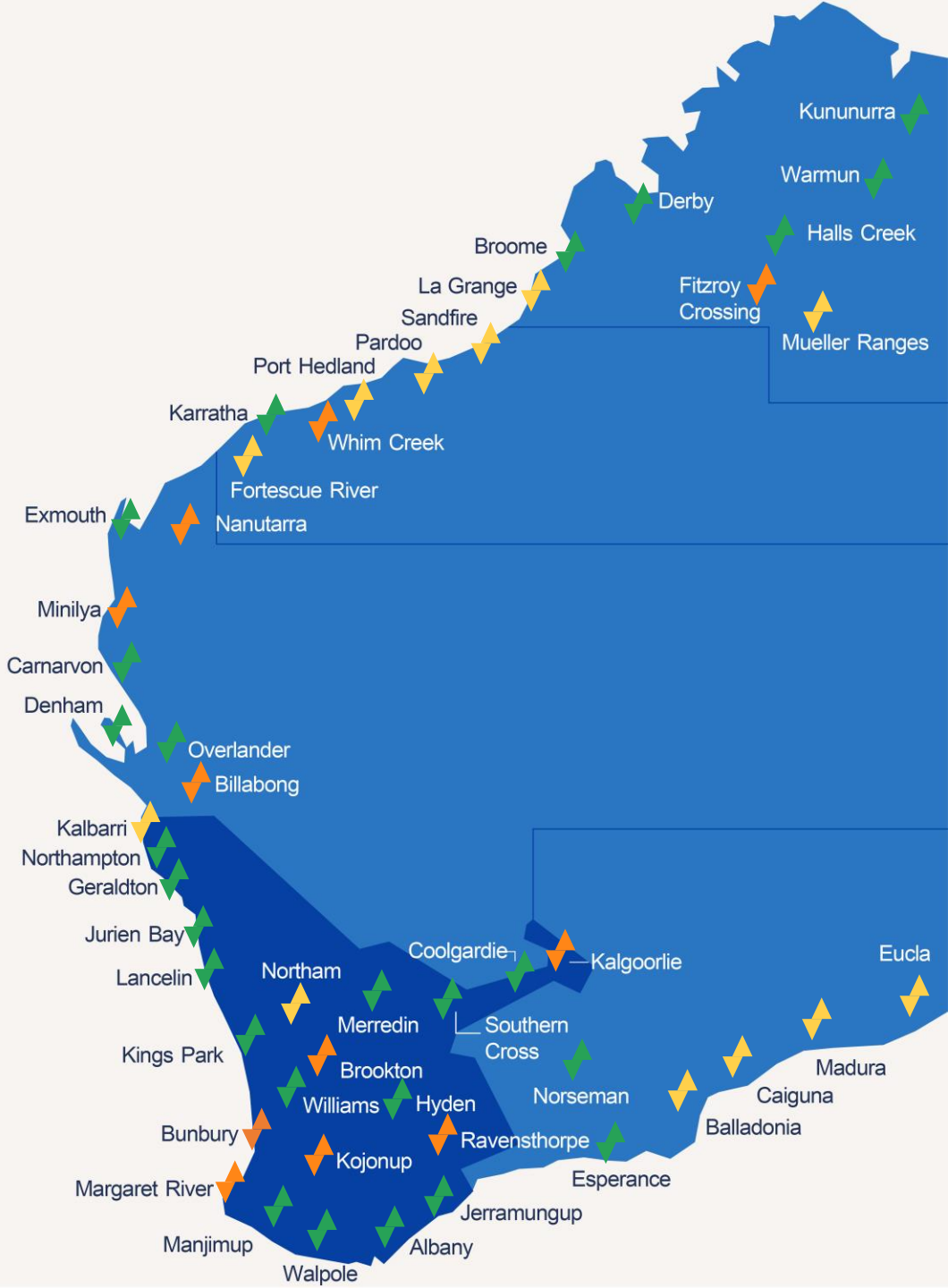
Feb 2024

Western Australia Electric Vehicle Charger Map

Intended charging station locations for the State Government's EV charging network.

- Live EV Charging Locations (26)
- EV Charging Locations Under Construction (11)
- Planned EV Charging Locations (12)
- Synergy Service Area
- Horizon Power Service Area

WA EV NETWORK



Latest sites

Jerramungup

Hyden

NETWORK

What’s next

By Q1 2024

- Bunbury
- Margaret River
- Kalgoorlie
- Fitzroy Crossing

Q2 2024 in the SWIS

- Kojonup
- Ravensthorpe
- Brookton
- Kalbarri
- Northam

NETWORK

Other Info

- **Black Screens => Report to CF**

- **Albany - Power Outage for Tesla works – 13th March 2024**

NETWORK

WA EV Network – Data Report
8 Jan 2024

WA EV NETWORK

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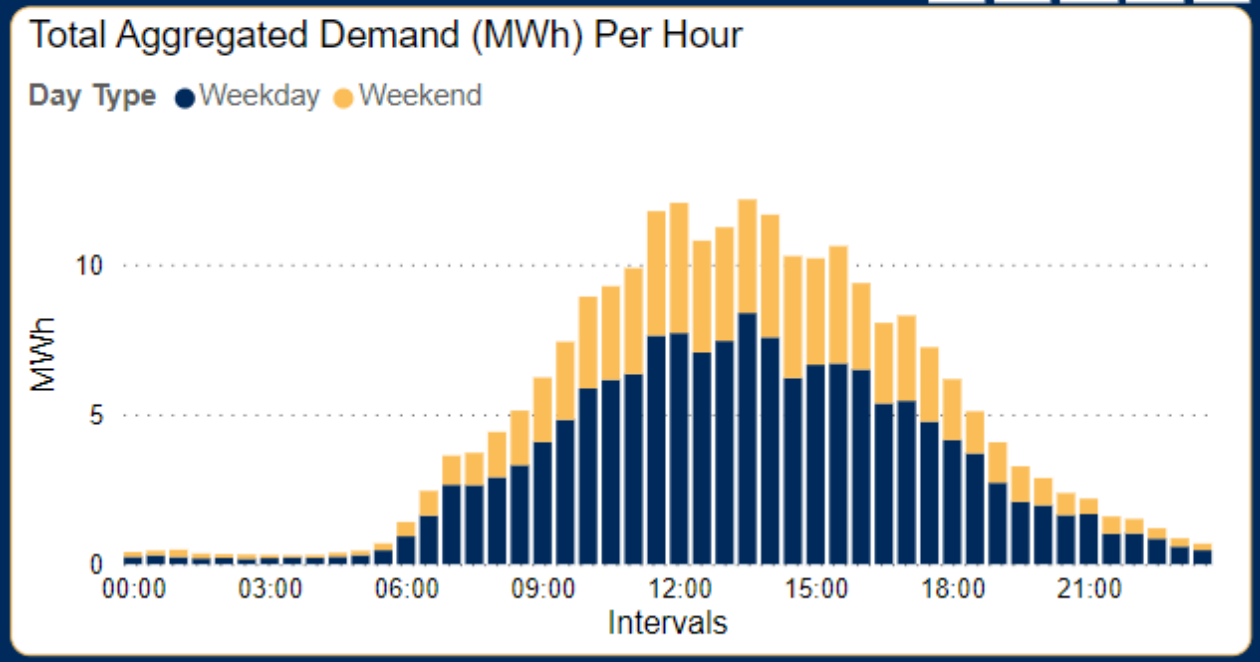
WA EV NETWORK DASHBOARD

Aggregated Values

There are currently 14 DC fast chargers live across the Synergy operated part of the WA EV Network. We have over 6,000 charges and 56% of all charging occurs between 9am and 3pm which is great for grid stability. It is also good from a generation perspective due to the proportion of renewables being used during this period.
The following pages show individual location performance for these chargers



6063
Total Uses

61.6
CO2 Abated (Tons)

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WA EV NETWORK DASHBOARD

Charge Station Location

ALBANY

17/05/2023
Start Date

4
Daily Uses

31.227
Total Usage (MWh)

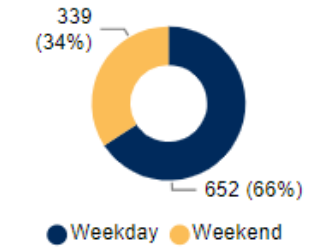
34
Average Charge (Mins)

32
Average Charge (kWh)

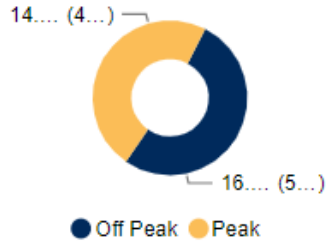
2
Max Days Without Use

10.0
CO2 Abated (Tons)

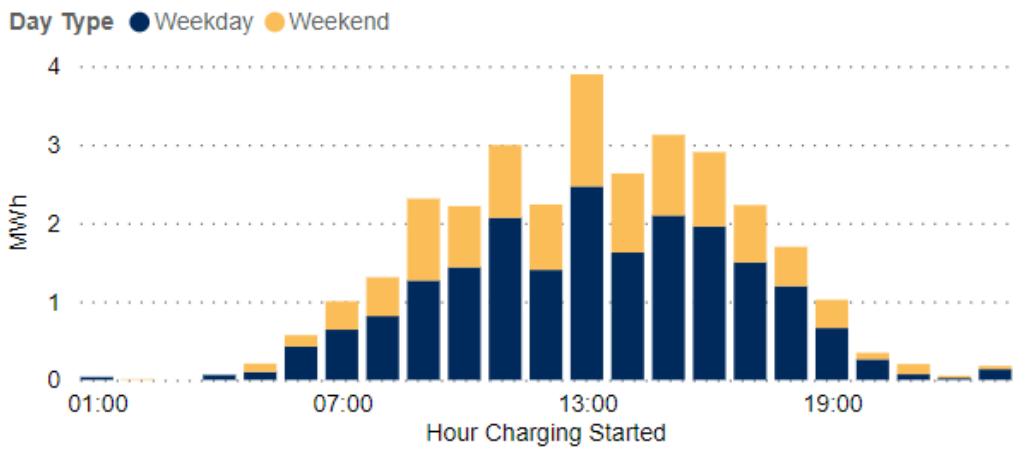
Day Type Uses



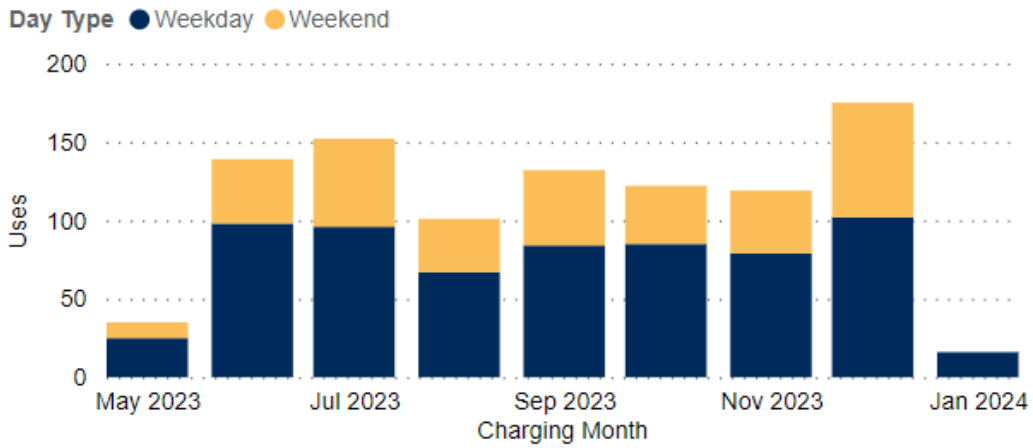
Time of Usage (MWh)



Total Aggregated Usage (MWh) Per Hour



Total Uses Per Month



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WA EV NETWORK DASHBOARD

Charge Station Location

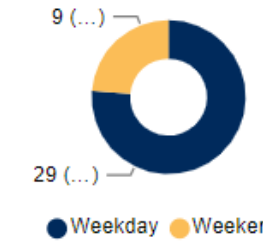
COOLGARDIE

25/10/2023
Start Date

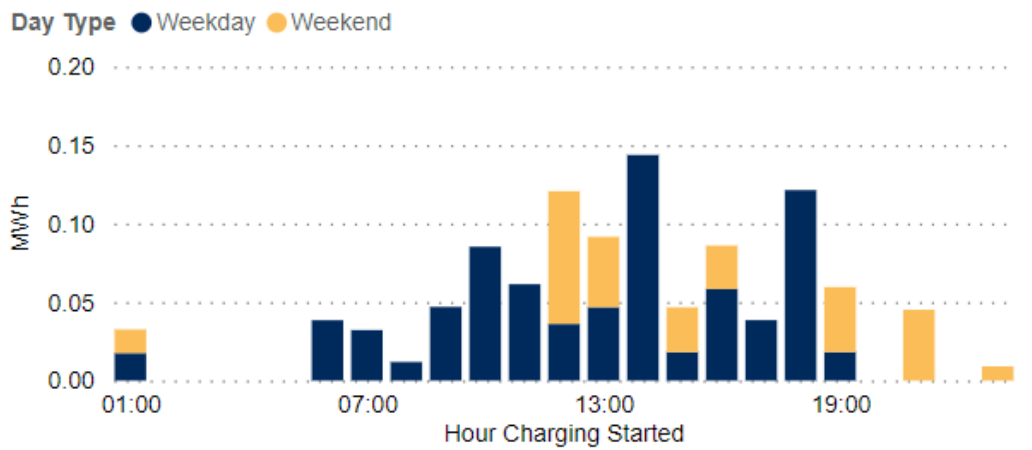
2
Daily Uses

1.071
Total Usage (MWh)

Day Type Uses



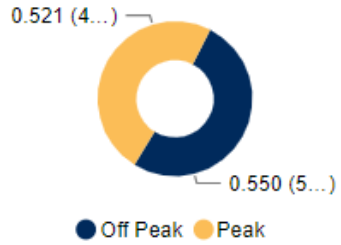
Total Aggregated Usage (MWh) Per Hour



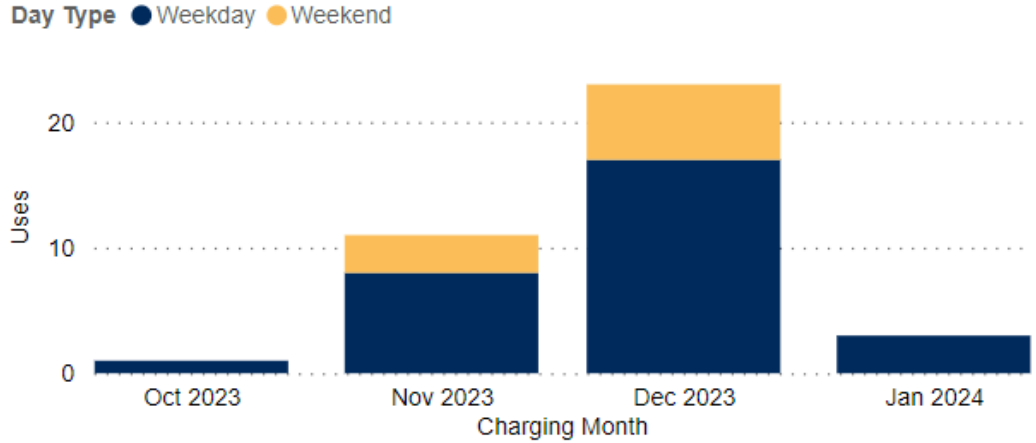
22
Average Charge (Mins)

28
Average Charge (kWh)

Time of Usage (MWh)



Total Uses Per Month



45
Max Days Without Use

0.3
CO2 Abated (Tons)

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WA EV NETWORK DASHBOARD

Charge Station Location

GERALDTON

04/04/2023
Start Date

2
Daily Uses

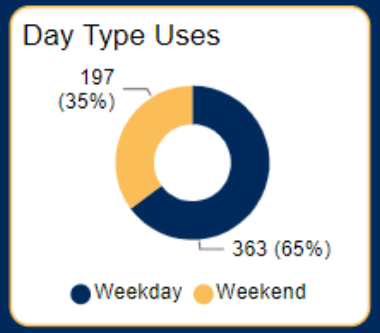
17.693
Total Usage (MWh)

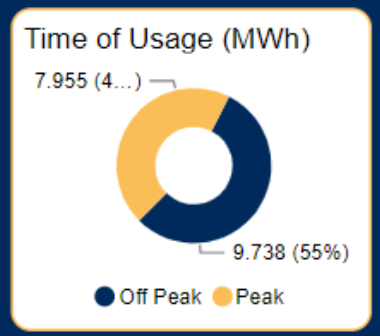
33
Average Charge (Mins)

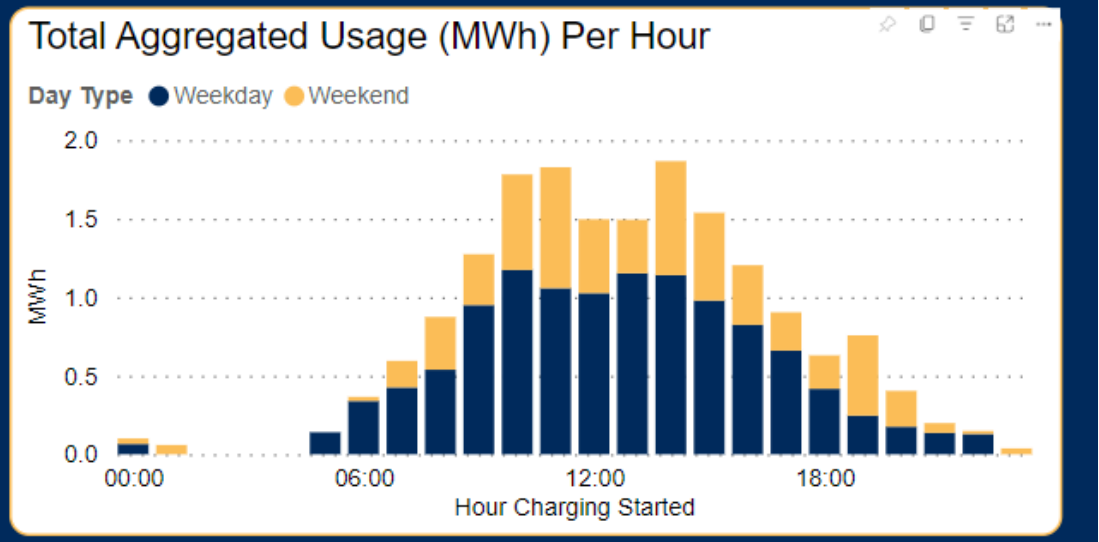
32
Average Charge (kWh)

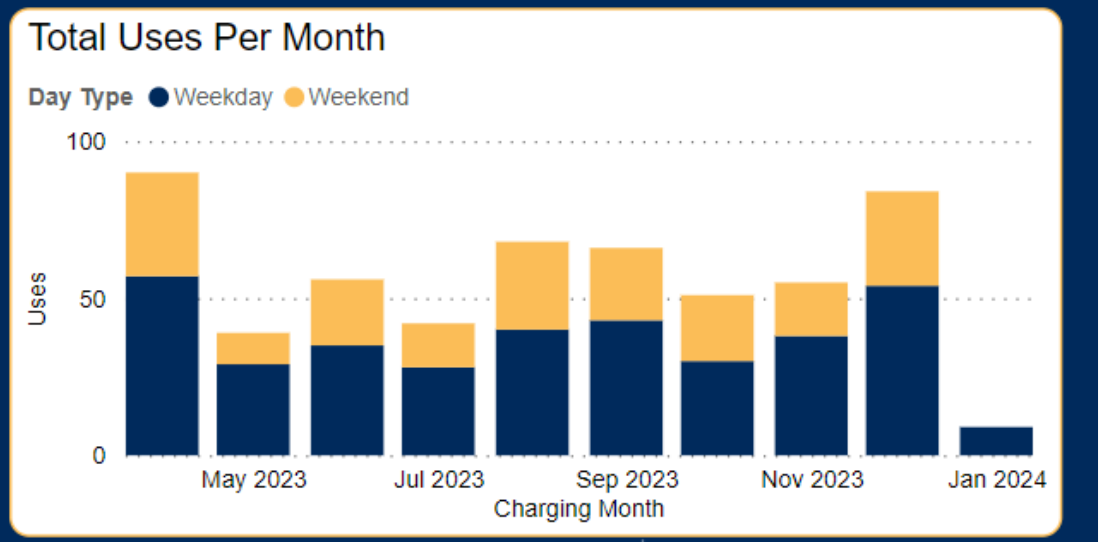
46
Max Days Without Use

5.6
CO2 Abated (Tons)









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WA EV NETWORK DASHBOARD

Charge Station Location

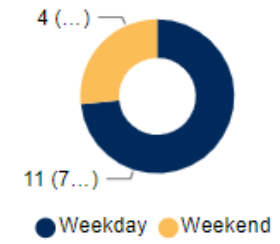
HYDEN

15/12/2023
Start Date

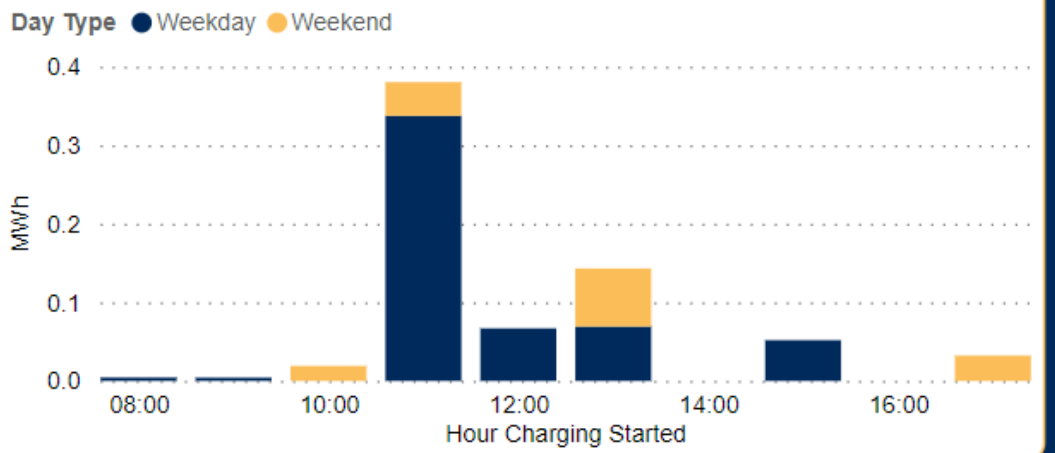
1
Daily Uses

0.702
Total Usage (MWh)

Day Type Uses



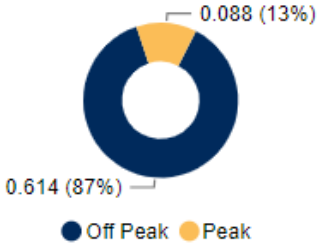
Total Aggregated Usage (MWh) Per Hour



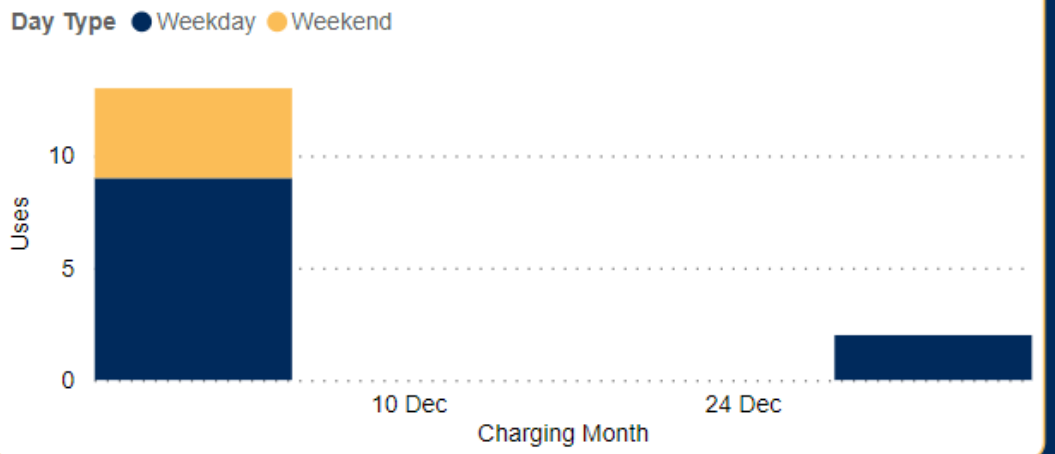
46
Average Charge (Mins)

47
Average Charge (kWh)

Time of Usage (MWh)



Total Uses Per Month



7
Max Days Without Use

0.2
CO2 Abated (Tons)

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WA EV NETWORK DASHBOARD

Charge Station Location

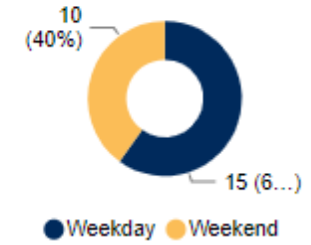
JERRAMUNGUP

14/12/2023
Start Date

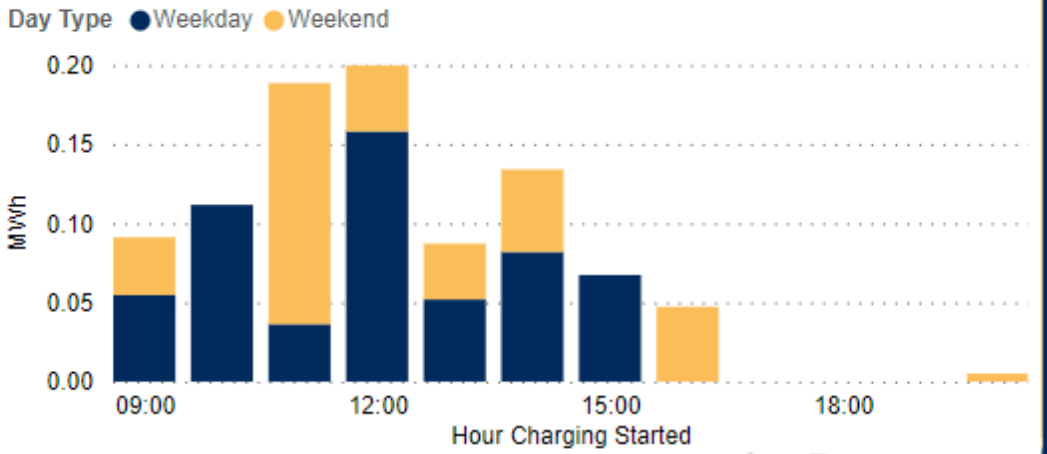
2
Daily Uses

0.932
Total Usage (MWh)

Day Type Uses



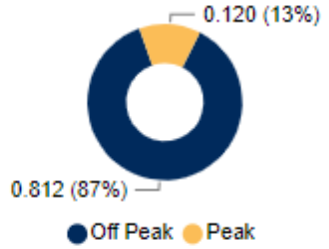
Total Aggregated Usage (MWh) Per Hour



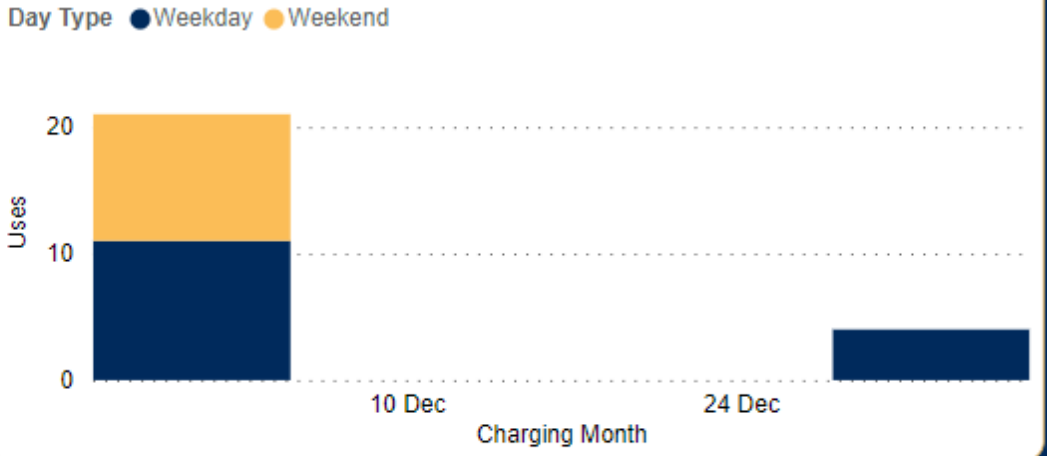
35
Average Charge (Mins)

37
Average Charge (kWh)

Time of Usage (MWh)



Total Uses Per Month



5
Max Days Without Use

0.3
CO2 Abated (Tons)

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WA EV NETWORK DASHBOARD

Charge Station Location

JURIEN BAY

18/09/2023
Start Date

4
Daily Uses

13.934
Total Usage (MWh)

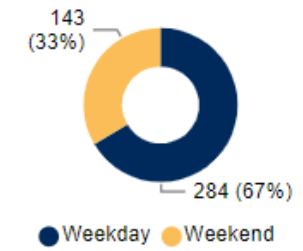
32
Average Charge (Mins)

33
Average Charge (kWh)

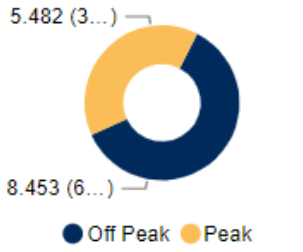
2
Max Days Without Use

4.4
CO2 Abated (Tons)

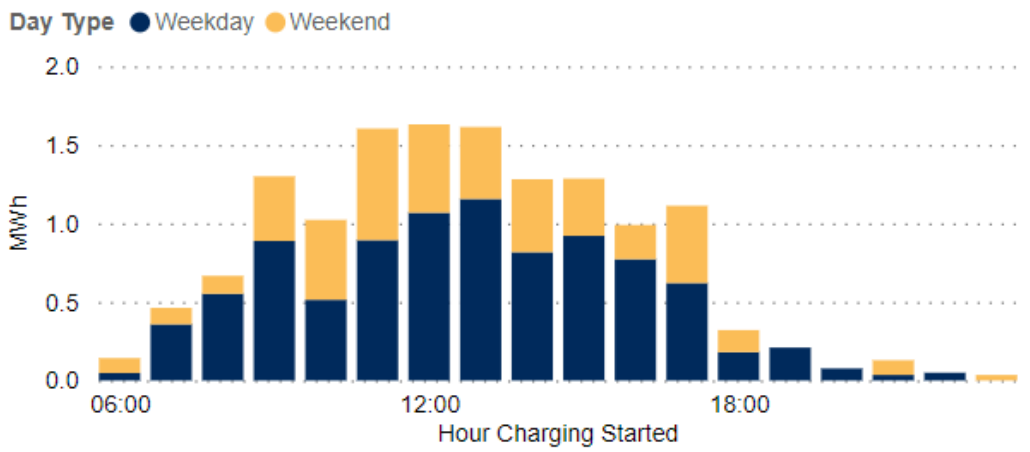
Day Type Uses



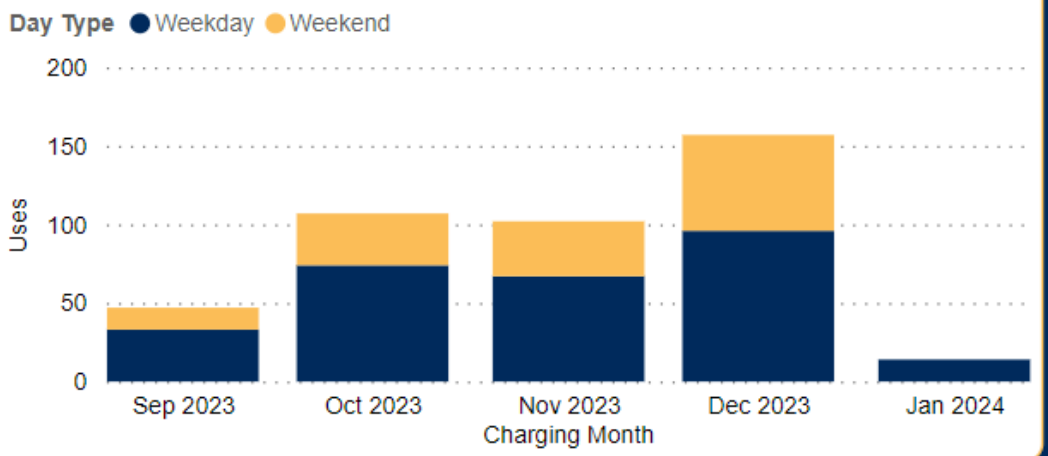
Time of Usage (MWh)



Total Aggregated Usage (MWh) Per Hour



Total Uses Per Month



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WA EV NETWORK DASHBOARD

Charge Station Location

KINGS PARK

01/09/2023
Start Date

14
Daily Uses

53.211
Total Usage (MWh)

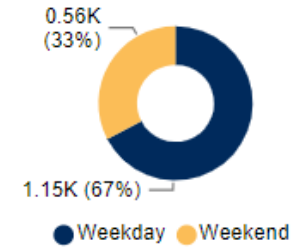
32
Average Charge (Mins)

31
Average Charge (kWh)

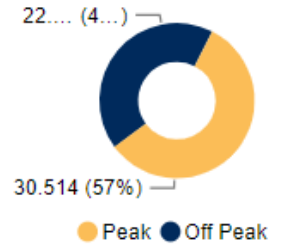
-2
Max Days Without Use

17.0
CO2 Abated (Tons)

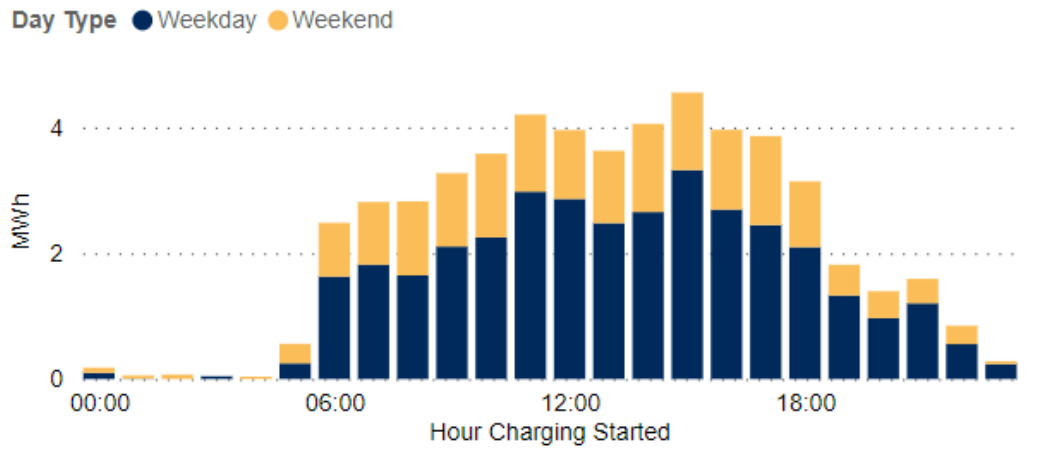
Day Type Uses



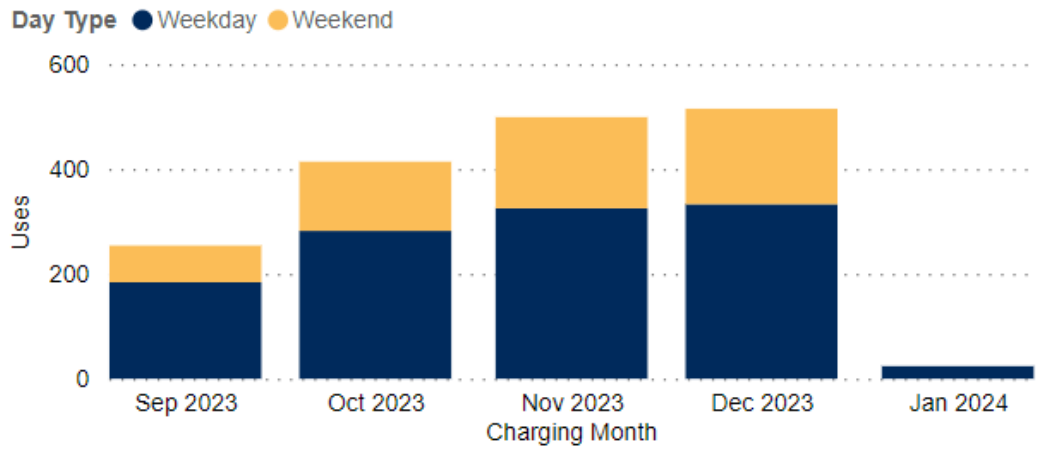
Time of Usage (MWh)



Total Aggregated Usage (MWh) Per Hour



Total Uses Per Month



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WA EV NETWORK DASHBOARD

Charge Station Location

LANCELIN

28/06/2023
Start Date

3
Daily Uses

12.554
Total Usage (MWh)

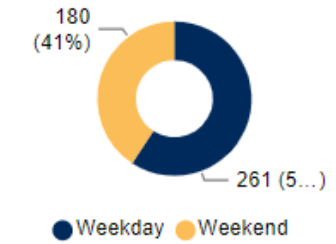
28
Average Charge (Mins)

28
Average Charge (kWh)

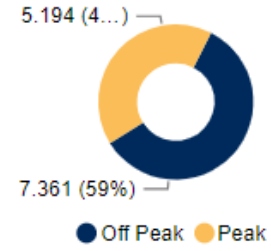
31
Max Days Without Use

4.0
CO2 Abated (Tons)

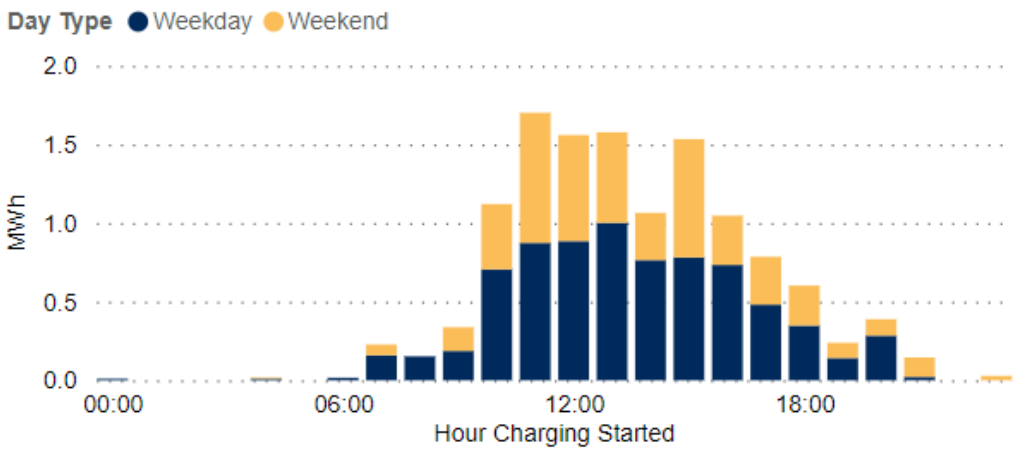
Day Type Uses



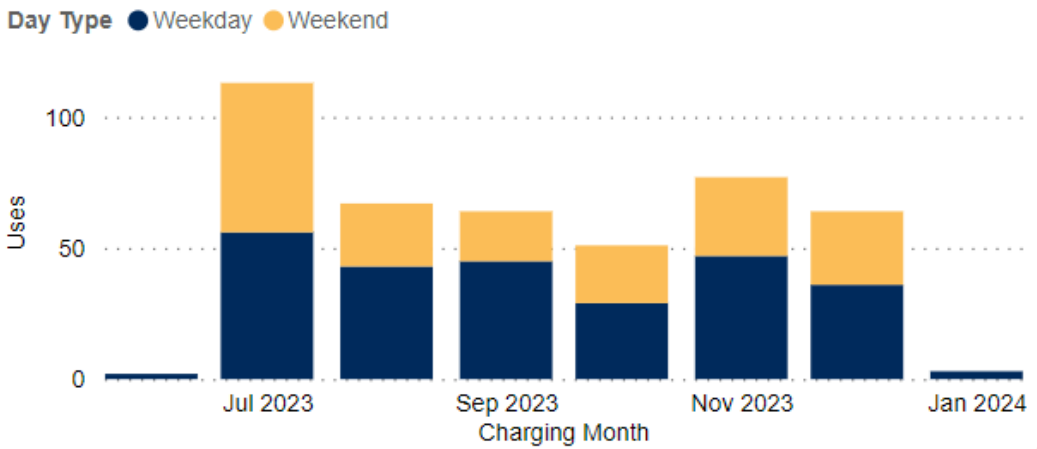
Time of Usage (MWh)



Total Aggregated Usage (MWh) Per Hour



Total Uses Per Month



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WA EV NETWORK DASHBOARD

Charge Station Location

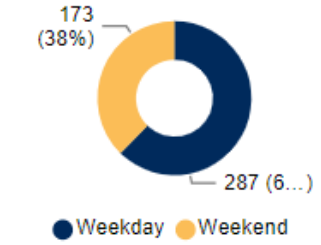
MANJIMUP

19/05/2023
Start Date

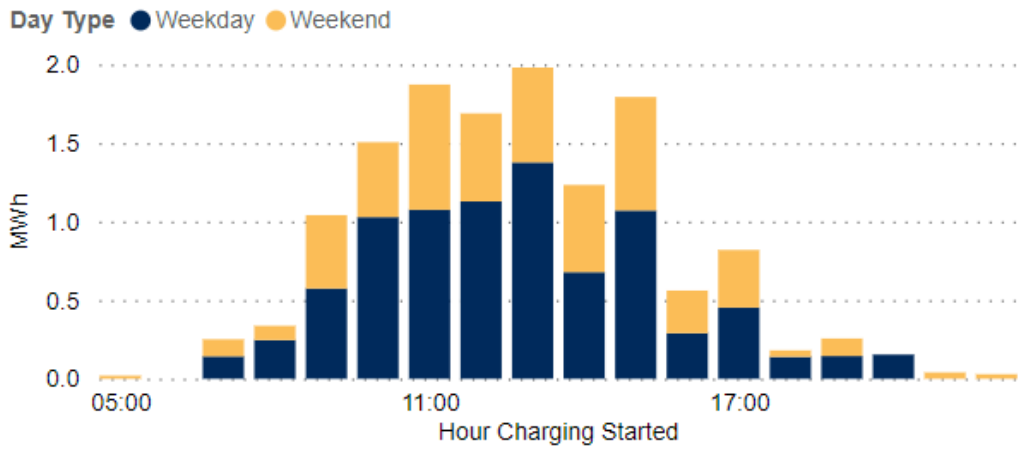
2
Daily Uses

13.763
Total Usage (MWh)

Day Type Uses



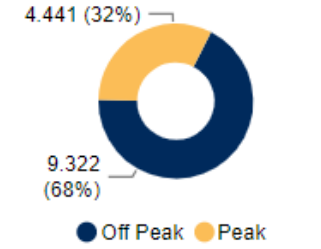
Total Aggregated Usage (MWh) Per Hour



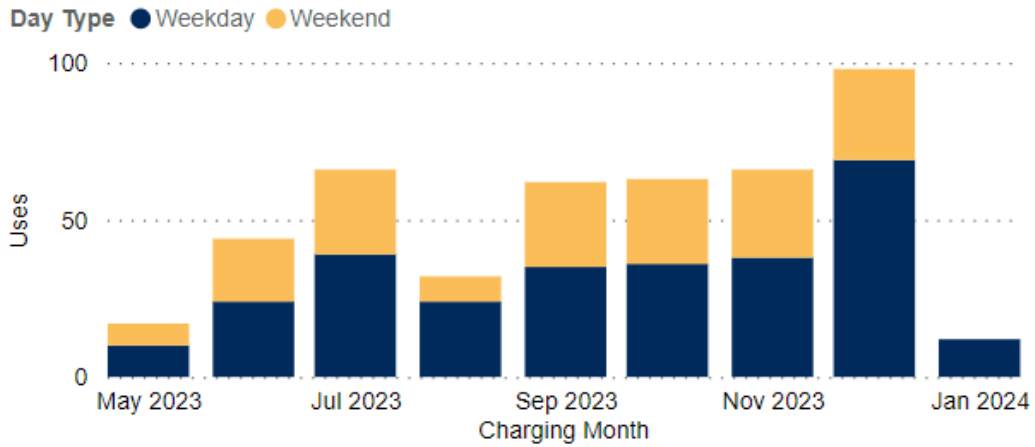
31
Average Charge (Mins)

30
Average Charge (kWh)

Time of Usage (MWh)



Total Uses Per Month



41
Max Days Without Use

4.4
CO2 Abated (Tons)

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WA EV NETWORK DASHBOARD

Charge Station Location

MERREDIN

25/10/2023
Start Date

2
Daily Uses

4.052
Total Usage (MWh)

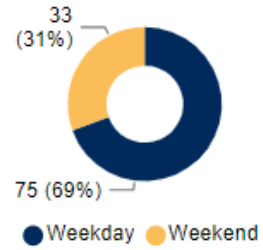
35
Average Charge (Mins)

38
Average Charge (kWh)

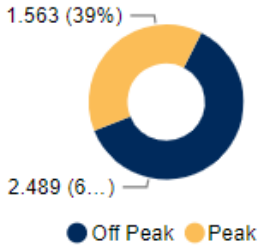
18
Max Days Without Use

1.3
CO2 Abated (Tons)

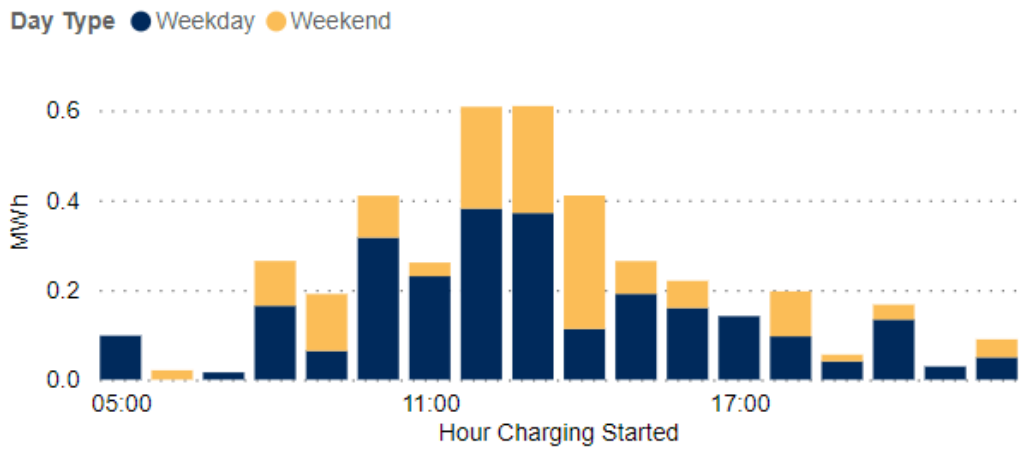
Day Type Uses



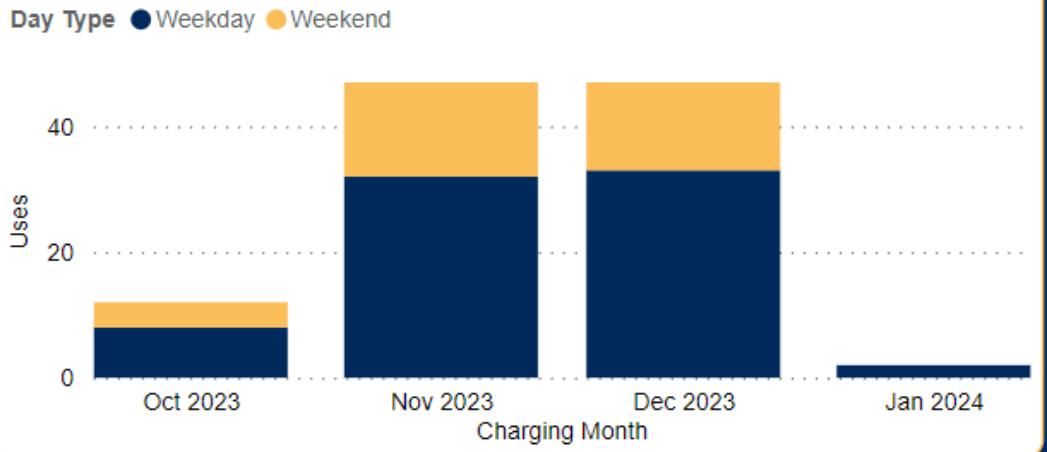
Time of Usage (MWh)



Total Aggregated Usage (MWh) Per Hour



Total Uses Per Month



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WA EV NETWORK DASHBOARD

Charge Station Location

NORTHAMPTON

05/04/2023
Start Date

2
Daily Uses

6.104
Total Usage (MWh)

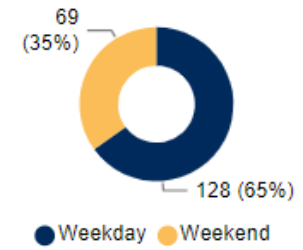
30
Average Charge (Mins)

31
Average Charge (kWh)

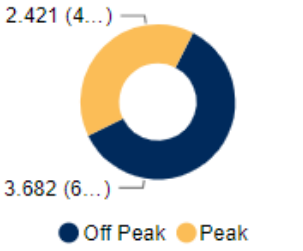
153
Max Days Without Use

1.9
CO2 Abated (Tons)

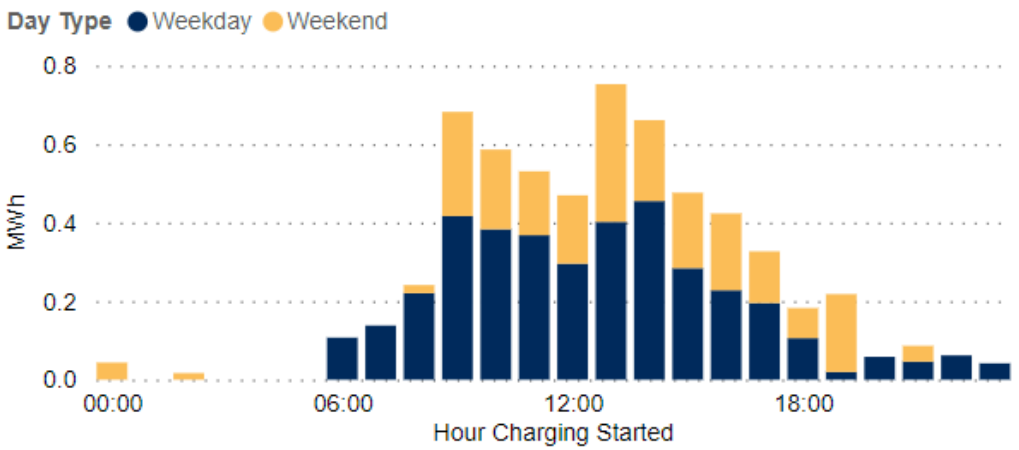
Day Type Uses



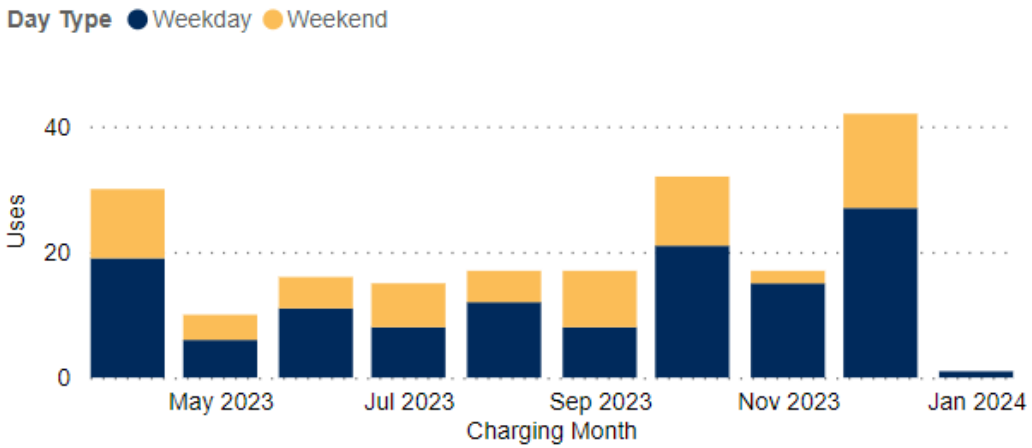
Time of Usage (MWh)



Total Aggregated Usage (MWh) Per Hour



Total Uses Per Month



WA EV NETWORK

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WA EV NETWORK DASHBOARD

Charge Station Location

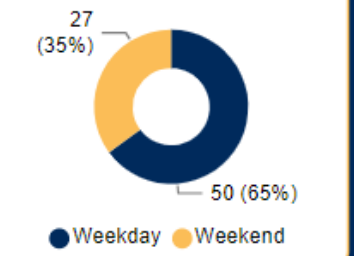
SOUTHERN CROSS

26/10/2023
Start Date

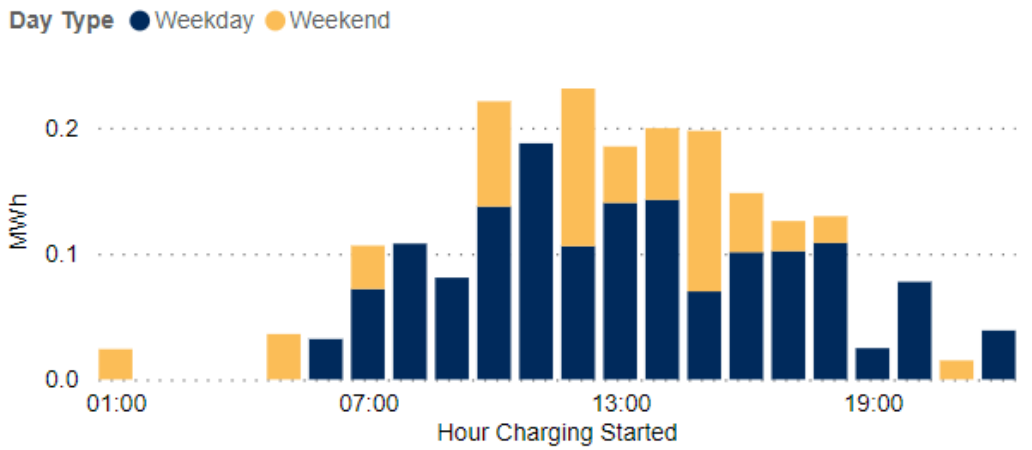
2
Daily Uses

2.170
Total Usage (MWh)

Day Type Uses



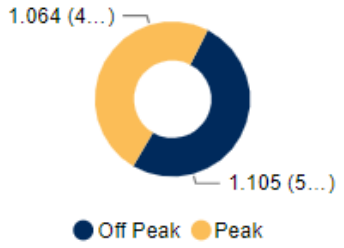
Total Aggregated Usage (MWh) Per Hour



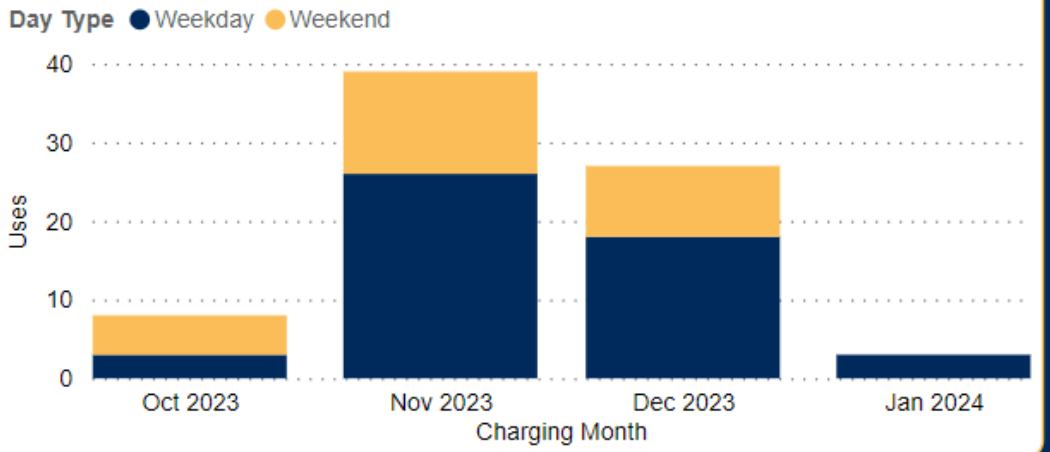
25
Average Charge (Mins)

28
Average Charge (kWh)

Time of Usage (MWh)



Total Uses Per Month



25
Max Days Without Use

0.7
CO2 Abated (Tons)

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WA EV NETWORK DASHBOARD

Charge Station Location

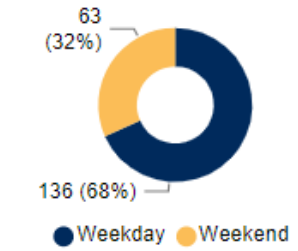
WALPOLE

28/07/2023
Start Date

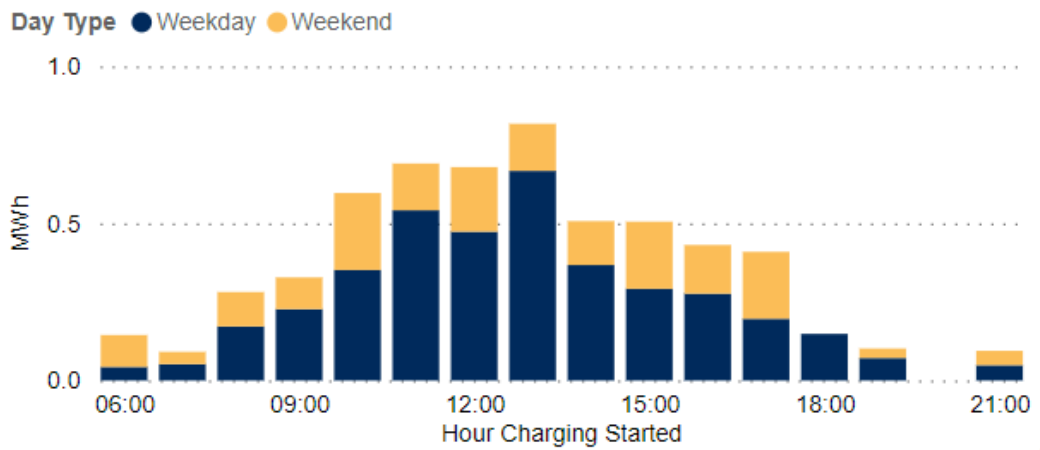
2
Daily Uses

5.830
Total Usage (MWh)

Day Type Uses



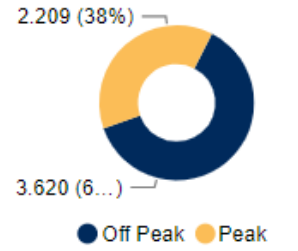
Total Aggregated Usage (MWh) Per Hour



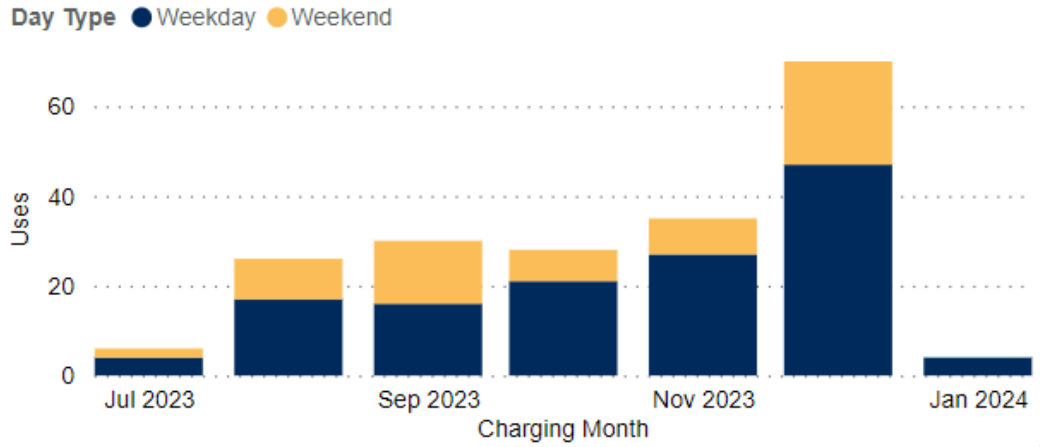
31
Average Charge (Mins)

29
Average Charge (kWh)

Time of Usage (MWh)



Total Uses Per Month



53
Max Days Without Use

1.9
CO2 Abated (Tons)

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WA EV NETWORK DASHBOARD

Charge Station Location

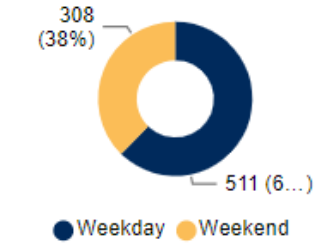
WILLIAMS

19/05/2023
Start Date

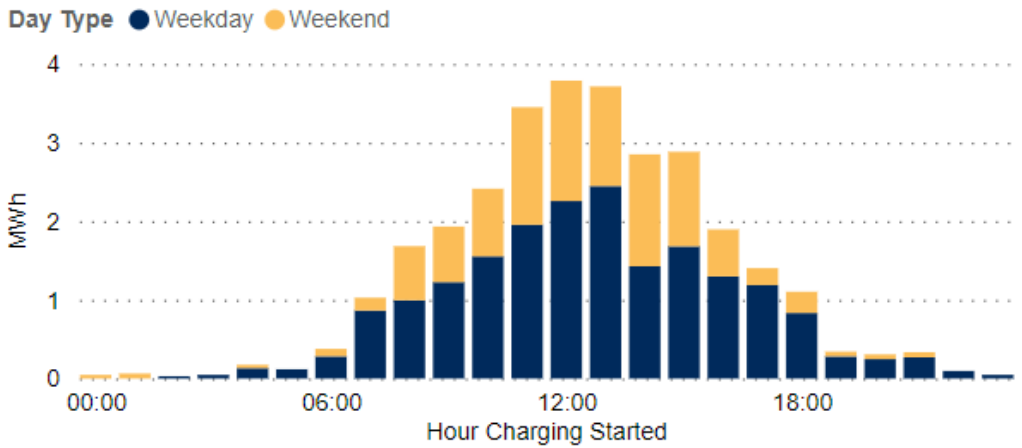
4
Daily Uses

30.127
Total Usage (MWh)

Day Type Uses



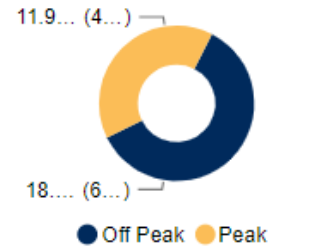
Total Aggregated Usage (MWh) Per Hour



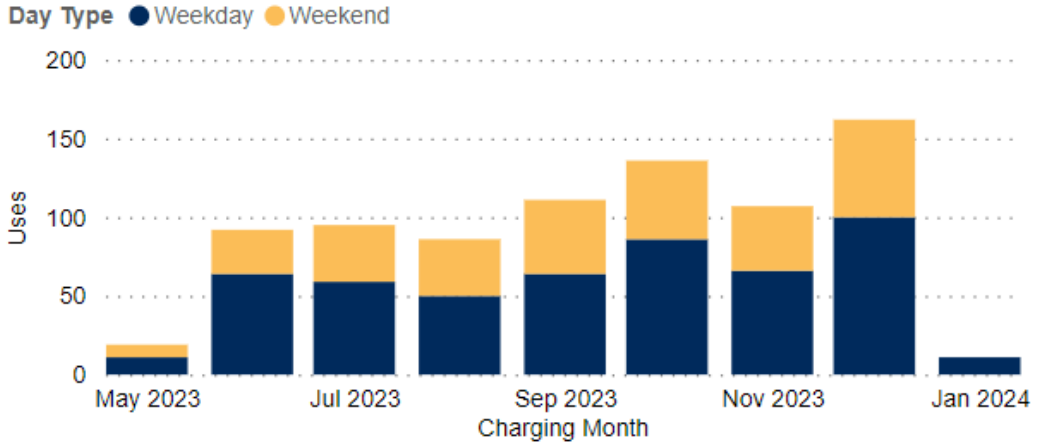
36
Average Charge (Mins)

37
Average Charge (kWh)

Time of Usage (MWh)



Total Uses Per Month



13
Max Days Without Use

9.6
CO2 Abated (Tons)

WA EV NETWORK

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AC Chargers

Location	Total Usage (MWh)	Average Charge (kWh)	Average Charge (Mins)
Coolgardie	0.006	2	11
Hyden	0.054	4	23
Jerramungup	0.009	1	7
Jurien Bay	0.055	3	38
Kalbarri	0.003	3	27
Kings Park	1.525	12	153
Lancelin	0.040	3	26
Manjimup	0.267	10	124
Merredin	0.016	2	20
Northampton	0.009	1	8
Southern Cross	0.044	4	22
Walpole	0.180	7	53
Williams	0.084	3	24

Life to date performance of AC chargers at locations where we have them installed

Idle Fees

- The tables below show estimated idle fees (ie using pivot of parked time less 10 min grace period) sorted by charging location.
- Table 1 is for the DC chargers and although no idle fees are charge for AC chargers Table 2 shows how not having idle fees leads to far greater overstays

Table 1

Row Labels	Total Parked minutes	Count of Idle Fees	Avg Idle fee minutes
WA EV Network - Albany	518	29	17.9
WA EV Network - Geraldton	506	27	18.7
WA EV Network - Hyden	10	2	5.0
WA EV Network - Jurien Bay	195	18	10.8
WA EV Network - Kalbarri	6	2	3.0
WA EV Network - Kings Park	884	54	16.4
WA EV Network - Lancelin	213	8	26.6
WA EV Network - Manjimup	128	15	8.5
WA EV Network - Merredin	33	3	11.0
WA EV Network - Northampton	30	4	7.5
WA EV Network - Southern Cross	20	3	6.7
WA EV Network - Walpole	15	3	5.0
WA EV Network - Williams	223	16	13.9
Grand Total	**2781**	**184**	**15.1**

Table 2

Row Labels	Total Idle Fee minutes	Count of Idle Fees	Avg Idle Fee minutes
WA EV Network - Jerramungup	31	1	31.0
WA EV Network - Jurien Bay	448	5	89.6
WA EV Network - Kings Park	2980	33	90.3
WA EV Network - Lancelin	14	1	14.0
WA EV Network - Manjimup	1147	4	286.8
WA EV Network - Southern Cross	9	1	9.0
WA EV Network - Walpole	664	5	132.8
Grand Total	**5293**	**50**	**105.9**

COMMENTS

CO2 abatement uses an industry calculation – For example, the below shows the steps to get to a CO2 amount of 20.87kg from a charge amount of 65.55kWh:

The amount of CO2 abated is calculated as follows:

- We convert the charge session consumption to kms by multiplying by 6. This actually varies quite a bit by car type, but 6 kms per kWh is a reasonably conservative number. That gives us 392 kms.
- We then take average gCO2 emissions of 182g/km (from https://greenvehicleguide.gov.au/pages/UnderstandingEmissions/VehicleEmissions) to get a total gCO2 that would have been emitted if this was a fuel vehicle
- We then multiply that number by the % of green energy we supplied (default of 29.2% used based on https://opennem.org.au/)

=(392.67*182)*29.2%
= 20,868g
= 20.87kg

GLOSSARY

Start date: This is the date the charging location first became live

Charge Station Location: Drop down filter allows specific locations to be displayed, noting that it won't differentiate specific ports but does only display the DC chargers at that location.

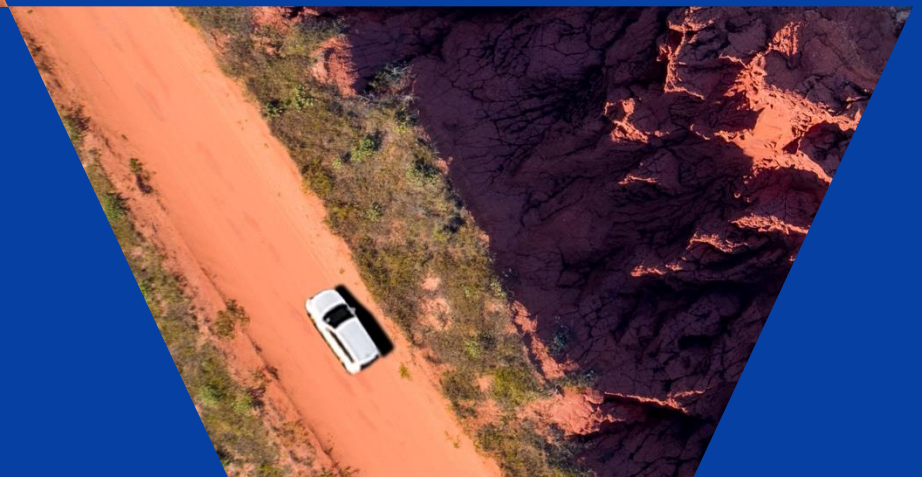
Time of usage: Off Peak time is 9am to 3pm, Peak is any other time

Aggregated usage: Visual to show the demand for charging based on the time the session starts. This is a life-to-date total (eg for Kings Park at 3pm there has been 1.84MWh of usage on a weekday and 0.59MWh on weekends

Max days without use: The total number of days since the charger became live where there were no recorded charging sessions

AC Charges: Each site has an AC charger as well (except Albany and Geraldton who have two DC chargers). These chargers are predominantly as backup however it also provides an option for a slower, longer charge at a cheaper rate should customers wish to park up for an extended time. Slide 19 shows performance and utilisation for these AC chargers.

Thank you



NETWORK