

## Sustainable vehicle options on the market today

Pros and cons, features, pricing, safety and range considered to pick vehicles that offer practical business use.



# Why we wrote this guide

Japanese Cars & UpstreamNZ have teamed up to create this guide as a way of empowering you to make a better informed decision for your next sustainable vehicle.

We know vehicle decisions (especially carbon reducing kinds) can be quite overwhelming, and it's often hard to know what information to trust. We've spent several months, compiling research and designing this sustainable guide to make your life easier. If you find this resource useful and you'd like to know more about where and how you can buy your next vehicle, please reach out to Tim through UostreamNZ.

#### Tim Larsen (Japanese Cars)

03 365 6180 jpnc@upstreamnz.co.nz www.upstreamnz.co.nz/use/JapaneseCars



## What is UpstreamNZ

## Why we are passionate about sustainability and social impact solutions

UpstreamNZ is a social and sustainable procurement platform that exists to generate funding for Good Causes who strengthen the well-being of young people.

When you contact and use one of our local suppliers through www.upstreamnz.co.nz, they give a portion of the sale towards our mission of helping children and young people across NZ. Our suppliers are passionate businesses that believe in seeing our communities healthier for the next generation.

Some of our suppliers also provide sustainable outcomes that offer solutions that reduce carbon, divert waste or improve energy efficiency. We continue to grow and

onboard further suppliers

that you could consider using, that would create impact in our communities and the environment. We wanted to make a practical and easy way to do good.

We are 100% started and owned by charities. We would be very grateful if you could help us; you can do this by telling our missional story, sharing this guide with someone you know who would benefit from it and consider using UpstreamNZ suppliers for your purchases.



### Create impact by using our suppliers

UpstreamNZ has many local suppliers you could use that relate to vehicles. When you use an UpstreamNZ supplier, you generate a contribution that goes towards the mission of strengthening the wellbeing of children and young people in NZ.

Other vehicle related suppliers UpstreamNZ has, that you could consider using:

- ✓ Vehicle Sign Writing
- Electricians (wiring your chargers)
- ✓ Vehicle Car Grooming
- ✓ Mechanic
- ✓ Panel Beater
- Selling Your Old Vehicle
- ✓ Vehicle Valuations
- ✓ Vehicle Insurance
- ✓ Mobile Tyre Service







## Nissan Leaf Gen 2

#### Small Vehicle Full EV 30KWH 2015-2017

Range	120KM-170KM
Business Friendly Features	Import models spec's vary but we can accessorise to suit
Charge Times	A/C 16A 8 hours to 100% / Using A/C Fast Charge Box 4.5 Hours / DC Rapid. Charge 50KW approx, 30 min to 80%
Safety	Import so specs vary model dependent
Power	80KW
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
<b>Towing Capacity</b>	Zero Rated Japan / Zero Rated by us
Luggage Capacity	368 Litres / 680 Litres seats folded

#### **More Information**

State of Health, type of usage and weather conditions affect the KM range a lot more in early EV's. Smaller battery allows for faster charge times or quick DC fast charge top ups.





## Nissan Leaf Gen 2

#### Small Vehicle Full EV 24KWH 2015-2017

Range	80KM-135KM
Business Friendly Features	Import models spec's vary but we can accessorise to suit
Charge Times	A/C 16A 7 hours to 100% / Using A/C Fast Charge Box 4 Hours / DC Rapid
Safety	Import so specs vary model dependent
Power	80KW
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
<b>Towing Capacity</b>	Zero Rated Japan / Zero Rated by us
Luggage Capacity	368 Litres / 680 Litres seats folded

#### **More Information**

Gen2 Nissan Leaf 24KW 2015-2017. Slightly faster charge times. Less range. Battery seems to degrade a little slower than the 30KW based on owners reports.



## **Toyota Prius**

#### Small Vehicle EV/HYBRID Range Solution 1.8L PHEV 2014-2016

Range	1386KM based on JC08 Test (45 Litre tank + EV / Hybrid)
Business Friendly Features	Import models spec's vary but we can accessorise to suit
Charge Times	8.8KWH Battery / A/C Standard 3 hours to 100% / Using Fast Chargers 2 Hours / Rapid Charge Not supported
Safety	Import so specs vary model dependent
Power	73KW 1.8L Engine
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
<b>Towing Capacity</b>	Zero Rated Japan / Zero Rated by us / Other Markets offered ratings
Luggage Capacity	446 Litres / 1120 Litres seats folded
EV Range	Zero Rated Japan / Zero Rated by us / Other Markets offered ratings

#### **More Information**

Toyota Prius Plug In Hybrid/Electric. Not a full EV but has four modes including full EV. Can charge and use like an EV for short distances in and out of work etc. Fuel consumption is as low as a claimed 1.6L per 100KMS! Working towards as clean as possible with answering the range issue so practical for business use. Larger luggage space than the Leaf. We advise strongly against the fitting of towbars / towing with transmissions designed for fuel economy.

<sup>\*</sup>Price depending on KM, Battery State of Health, Condition, Spec and Year







## Nissan E Power Note

#### **Small Vehicle EV Plugless Petrol Generation 2016-2020**

Range	1000-1300km theoretical range (41 Litre tank)
Business Friendly Features	Import models spec's vary but we can accessorise to suit
EV Battery	1.5KWH
Safety	Import so specs vary model dependent
Power	61KW
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
Towing Capacity	Zero Rated Japan / Zero Rated by us
Luggage Capacity	381 Litres / 1465 Litres seats folded
EV Range	Drives constantly by battery motor powered via a petrol engine as a generator

#### **More Information**

Uses a petrol engine that turns on every few minutes to charge the battery to run the Electric motor. Drives like an EV for the EV experience but is not a plug in and uses a petrol engine as a generator to charge the battery.







## Toyota Aqua

#### Small Vehicle Hybrid 1.5L 2011-2020

Range	1300km (36 Litre tank) Based on JC08 Test
Business Friendly Features	Import models spec's vary but we can accessorise to suit
EV Battery	0.9KWH
Safety	Import so specs vary model dependent
Power	54KW 1.5L engine
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
<b>Towing Capacity</b>	Zero Rated Japan / Zero Rated by us
Luggage Capacity	260 Litres / 484 Litres seats folded

#### **More Information**

One of the most fuel efficient hybrid vehicles on the market. Huge model range and specs available. Affordable options, make great loan cars. Luxury options suit business use.







## Suzuki Swift

Small Vehicle 1.2L 2017-2020

Range	843km (37 Litre tank) Based on JC08 Test
EV Battery	0.9KWH
Safety	Import so specs vary model dependent
Power	67KW 1.2L engine
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
Towing Capacity	Zero Rated Japan / Zero Rated by us
Luggage Capacity	242 Litres / 556 Litres seats folded

Mild hybrid recommended for further fuel savings however Full hybrid version is not due to its single clutch automated manual gearbox that has no support in New Zealand. Better to buy an Aqua if requiring full hybrid.

#### **More Information**

Popular small hatch that will appeal to those who may not want the complexity of hybrid technology but want to keep their emissions as low as practical. Great way of getting into a current model vehicle for your fleet to look as modern as possible from only \$12000. Hybrid options available.







\*Price depending on KM, Battery State of Health, Condition, Spec and Year

## Mitsubishi Outlander

**SUV 2L PHEV 2013-2017** 

EV Range	50KM on electric motor only with plug in charging
Business Friendly Features	Import models spec's vary but we can accessorise to suit
EV Battery	13.8KWH
Safety	Import so specs vary model dependent
Power	87KW
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
Towing Capacity	Not Rated For Japanese Market / Other Markets offer a tow rating
Luggage Capacity	381 Litres / 1465 Litres seats folded
Charge Times	A/C standard 7 hours to 100% / Using A/C Fast Charge Box 5 hours / DC Rapid. Charge 50KW approx, 30 min to 80%

#### **More Information**

Full EV SUV's are relatively new to the market so multiple affordable options are not available yet. The best compromise on the market is this 1st Gen Mitsubishi Outlander Plug-in Hybrid Electric Vehicle. Making the most of electric and charging Mitsubishi promises as good as 1.9L per 100kms. One of the most sustainable choices below \$50,000. No 7 Seat version in PHEV.







\*Price depending on KM, Battery State of Health, Condition, Spec and Year

## Honda Vezel

**SUV Hybrid 1.5L 2013-2017** 

Range	1080KM (40L tank) JC08 Test (2WD Base) 3.7L per 100km
Business Friendly Features	Import models spec's vary but we can accessorise to suit
EV Motor	22KW
Safety	Import so specs vary model dependent
Power	97KW
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
<b>Towing Capacity</b>	800KG Braked (Due to 7 Speed DCT automatic)
Luggage Capacity	404 Litres / 1429 Litres seats folded

#### **More Information**

Smaller than the Outlander but surprisingly similar luggage space. Has the benefit of a 7 speed DCT automatic transmission which gives the vehicle the ability to tow. Wide range available of specs and trim levels even for hybrid models. Pricing is based on the lower spec models which the NZ market typically imports however we can get high spec for customers willing to pay additional. 4WD Available.





## Nissan X-Trail

SUV Hybrid 2.0L 2015-2017

Range	1236KM (60L tank) JC08 Test (2WD Base) 4.85L per 100km
Business Friendly Features	Import models spec's vary but we can accessorise to suit
EV Motor	29.8KW
Safety	Import so specs vary model dependent
Power	108KW
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
Towing Capacity	Zero Rated Japan / Zero Rated by us
Luggage Capacity	565 Litres / 945 Litres seats folded



\*Price depending on KM, Battery State of Health, Condition, Spec and Year

#### **More Information**

Larger Size with more powerful 2L motor at the trade-off for fuel economy. Large 60L fuel tank gives a long range for a SUV. Good luggage space with seats upright. 4WD available however fuel usage increases to 6.25L Per 100km.







## Subaru XV

**SUV Hybrid 2.0L 2013-2017** 

Range	1040KM (52L tank) JC08 Test (4WD) 5L per 100km
Business Friendly Features	Import models spec's vary but we can accessorise to suit
EV Motor	12.3KW
Safety	Import so specs vary model dependent
Power	110KW
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
Towing Capacity	Zero Rated Japan / Zero Rated by us
Luggage Capacity	380 Litres / 1270 Litres seats folded

#### **More Information**

Good option if wanting a 4WD Hybrid with 2L engine as fuel economy better than the X-Trail. Luggage space small compared to other options when seats upright. Folded the space is better. EV output is smaller but engine output is better. No tow rating but if ignored Subaru CVT transmissions are known to take more abuse than Nissan.







## **Toyota Corolla Fielder**

Station Wagon Hybrid 1.5L 2013-2017

Range	1238KM (36L tank) JC08 Test (Hybrid) 2.9L per 100km
Business Friendly Features	Import models spec's vary but we can accessorise to suit
EV Motor	45KW
Safety	Import so specs vary model dependent
Power	54KW
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
Towing Capacity	Zero Rated Japan / Zero Rated by us
Luggage Capacity	392 Litres / 872 Litres seats folded

#### **More Information**

If you don't need a SUV, need more range than an EV and something bigger than a hatch these are super value for money. For a sustainable as possible wagon with range this is a top choice. Wide range of trim specs in Japan. 2017 fuel economy improved from 3L per 100km to 2.9L per 100km. Don't let the petrol power put you off, both motors combined make 73KW.



## Nissan e-NV200

2014-2017

Range	120KM approx, low km example (load, cold weather, highway use etc will reduce range)
Business Friendly Features	5 / 7 / 8 Seat or Delivery Van
Charge Times	A/C standard 12 hours to 100% / Using A/C Fast Charge Box 4-7 Hours / DC. Rapid Charge 46KW max approx, 27 min to 80%
Safety	Import so specs vary model dependent
Power	80KW / 245NM
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
<b>Towing Capacity</b>	Zero Rated Japan / Zero Rated by us
Cargo Area	2000L
Loading dimensions	Stand up room 1.36M / 1.22M between wheel arches
Max Payload	681KG

#### **More Information**

Only 2nd Hand EV van on the market currently. Range not suitable for couriers and all day town use. Good for city outings or businesses that may spend a long time at jobs / work in a small area where they will not travel too far in one day. Great van that has its place with the right type of use. No point to buy the petrol model if wanting range as the Toyota Noah / Voxy / Esquire hybrid can offer 8KM/L better fuel economy.





\*Price depending on KM, Battery State of Health, Condition, Spec and Year

## Toyota Noah, Voxy, Esquire

#### 1.8 Hybrid 2014-Present

Range	1190KM (50L tank) JC08 Test (Hybrid) 4.2L per 100km
Business Friendly Features	7 Seat (Remove rear seats to use as economical delivery van)
EV Motor	60KW (combined output 100KW engine and electric)
Safety	Import so specs vary model dependent
Power	73KW / 142NM
Battery Warranty	2nd hand import so no manufacturer warranty but up to 4 year warranties available for purchase through Japanese Cars Ltd
<b>Towing Capacity</b>	Zero Rated Japan / Zero Rated by us
Cargo Area	281L Seat back / increases approx, 3x with rear seats folded and centre row forward - Indoor space is: 2930mm x 1540mm x 1400mm
<b>Loading Dimensions</b>	Stand up room 1250mm / 1210mm wide

#### **More Information**

If wanting an 8 seater only offered in non-hybrid options, or look at Estima / Vellfire / Alphard Hybrids. Non non-hybrid economy is still better than the NV200. Seats can be removed to make a cheap running delivery van if not needed Hiace size. Hiace only around 8km/l fuel vs these with 22.8km/l. Later model Estima / Alphard / Vellfire Hybrids are \$30000-\$130000.



#### **Key Features**

Power Ratings: 3.6kW // 7.2kW Universal Socket 3 year product warranty

## **EO Mini EV Charger**

The smallest fast charger on the market; designed and built specifically for charging-up at home.



#### **Product Information**

- ✓ A simple, non-internet connected, plug and play charger.
- ✓ Choose between a 3.7kW or 7kW charger
- ✓ Charge speed: 19 or 40 kms per hour
- ✓ Warranty: 3-year parts and labour

#### **Unique Features**

When paired with an EO Home Hub (sold separately) the combination is grid friendly with Home Load Management and Solar Integration

#### **EO Mini Pro 2 Solar**

World's smallest smart charger, perfect for the everyday electric vehicle driver.



### **EO Basic Charger**

EO basic charger is designed for charging at home.





Manage, monitor and schedule your charging sessions with our EO Smart Home app. Home power balancing ready and locking feature to prevent others from using your charger.

Smart control: Start, stop and schedule your charging sessions all from the palm of your hand. Monitor energy usage and manage access to your electric vehicle charger using our iOS & Android smartphone app.



With no software, just plug in and instantly get a charge. No nonsense. Just a simple plug and play charging solution. This charger can be wired as a 3.6kW or 7kW single-phase charger, or as an 11kw or 22kW three-phase charger. Chargers every EV on the market (you must bring your cable). Basic socket with no auto-lock. Power Ratings: 3.6kW / 7kW / 11kW / 22kW

## Full list of every USED EV

#### you can currently buy in NZ

Model	Price	Range
Nissan Leaf	\$7,000 to \$68,000	Between 117 and 360km depending on model and year when new
Mitsubishi i-MiEV	\$10,000 to \$15,000	Between 100 and 160km depending on model when new.
Mitsubishi Minicab MiEV	\$13,000 (only one on sale at the time of writing)	Up to 100km when new.
Smart FourTwo EV	\$17,000 to \$20,000	Between 110 and 140km depending on year.
Nissan e-NV200	\$23,000 to \$32,000	Up to 300km depending on year when new.
Renault Zoe	from \$26,500 to \$60,000	Between 100km and 300km depending on year and model.
BMW i3	\$29,000 to \$82,000	Between 100 and 302km depending on model and year.
Renault Kangoo	from \$35,000 to \$44,000	Up to 200km.
Hyundai Ioniq Electric	from \$40,000 to \$67,000	Up to 220km.
Volkswagen e-Golf	from \$45,000 to \$70,000	Around 220km.
Kia Niro EV	from \$66,000 to \$76,000	Between 289 and 450km depending on model.
Tesla Model S	from \$75,000	Between 335 and 540km depending on year and model.
Tesla Model 3	from \$99,000 (one on sale at time of writing)	Up to 600km.
Tesla Model X	from \$115,000 to \$175,000 (only used model on sale at the time of writing)	Between 320km and 507km, depending on year and model.
Jaguar I-Pace	from \$140,000 (only used model on sale at the time of writing)	Up to 470km.







## What does the future look like?

#### Sustainability in the next 5-10 years



EV Km range expected to double as it did in the last 10 years and we could see this as soon as just 5 years

- Lack of charging locations on the West Coast and between Blenheim and Kaikoura to be addressed making commercial options more viable.
- With range comes the issue of bigger batteries requiring longer charging times so stronger rapid chargers will be introduced to reduce times further and mass deployment of rapid chargers expected. Germany 350kw/h rapid chargers already.
- Europe and South Korea to be big on introducing EVs into the NZ Market. More SUVs and light duty commercials to come.
- Japan grey market to introduce hybrids to the mass private market sparking interest in EVs once range increases and cost of manufacturing decreases. (The tipping point.)
- Japan to hold back investing heavily in hydrogen whilst providing affordable hybrid options that weigh up on paper as the best value for money for private / commercial vehicles.
- Hyundai sees Japan's direction towards a hydrogen future so works to establish strong brand loyalty through business fleet connections and partnerships. Pushing to roll out hydrogen fuelling stations across NZ and get a foothold on the market in advance (next 5 years starting now).
- Hyundai or Toyota are likely to be the first to release a hydrogen fuel cell EV SUV in NZ within 5 years with approx. 700km range. Mercedes has options under testing also.





Many Manufactures plan to Stop R&D of Petrol/Diesel Engines by 2025 so should be phased out of their ranges by 2035 as EV becomes more mainstream.

- Cost of hydrogen production is higher than fuel, but 5 min recharge times make it an attractive option for those willing to pay for sustainability and longer EV range.
- ➤ Toyota expected to introduce hydrogen fuel cell EV's 10 years+ or as production costs of hydrogen start to balance with the cost of petroleum. (Right - Mirai Fuel Cell EV selling already since 2014 to public in Japan).
- Japan's market has the most hydrogen fuelling stations per capita in the world and the grey import market will heavily influence the NZ market towards hydrogen EV / pure EV. (Options ready for import now just awaiting infrastructure.)
- Hydrogen fuel cell EVs will answer the need for commercial vehicle range, required power consumption, recharge/refill times. Likely we will only see lighter commercial options within 10 years, at least on the New Zealand market, heavy later.

- Towing capacity is limited by the size of the vehicle and most EVs are not rated or suitable for towing however we may see vehicles uprated to suit. Larger Euro EVs are expected to be rated and may achieve 1000kg plus ratings. It is expected in general that only commercial vehicles will be rated until fuel cell EVs arrive.
- Vans are still a few years off being practical enough but the savings on RUC and diesel will quickly see their popularity soar as recharge times reduce sub 1 hour. (Toyota ProAce Van to be offered with a 15 year, 1 million km battery warranty in Europe)
- Auckland has signed an international agreement to ban ICE from 2030 and buses from 2025. If it comes into play within that time frame, we would imagine only in the Auckland CBD will the ban take place. It will encourage business within to switch to EV.
- Wind farms and other sustainable power generation built to keep up with increased demand.

## **Japanese Cars**

Japanese Cars owner Tim Larsen has dedicated 20 years to the vehicle industry becoming an expert in sourcing, inspecting, appraising and the buying and selling of vehicles. After many years as a professional vehicle buyer sourcing late model high-quality stock direct from Japan for franchise dealers Tim had the vision to offer his expertise and connections directly to businesses. Giving the benefit directly of vehicle procurement and disposal methods that maximises purchasing power and minimizes selling losses.

Working for your best interests we give incredible value using our networks, supply chains and experience to create a tailor-made buying and selling plan based on your situation and vehicle requirements. We understand the needs your business has for its fleet usage and work to fulfil them with the most sustainable options available. We focus on high-quality vehicles that will offer long-term reliability regardless of budget. Whether you require one vehicle or an entire fleet we have the means to take care of the process for you stress free. We also offer vehicle grooming to upkeep the appearance of your fleet for business presentation and maintain resale value.

Working together with Japanese Cars and UpstreamNZ we will create a positive impact for the environment, whilst working to save your business money, along with creating great social impact by contributing to UpstreamNZ charitable foundation every time you use our services. Using our service via UpstreamNZ strengthens the well-being of children and young people in Aotearoa by generating funds for the Good Causes you choose to support.



"Working for your best interests we will give incredible value using our networks, supply chains and experience to create a tailor-made buying and selling plan."

Tim Larsen

## Sales and services

#### **Contact**

Tim Larsen (Japanese Cars)

03 365 6180 jpnc@upstreamnz.co.nz www.upstreamnz.co.nz/use/JapaneseCars



### **UpstreamNZ Contribution**

Any sale or service we achieve through UpstreamNZ, generates a portion of funding for charities that strengthen the wellbeing of young people, at no extra cost to the customer.

## What we can offer to your company

Japanese Cars (an UpstreamNZ supplier)

#### Sale of Your existing Fleet

- ✓ We can recondition, market and sale fleet vehicles
- ✓ Get the best price for your assets
- Can handle small or large volumes of cars to sell on your behalf

#### **Mobile Car Grooming**

- ✓ We make it easy, we come to you
- the extra mile to provide the hest results

#### **Research & Advisory** Services

- ✓ We pride ourselves on honest and integral research and advice
- ✓ We can offer specific information on your needs
- ✓ Get access to our 16 years knowledge of the industry

We groom business and consumer cars across Christchurch

✓ Affordable, quality and we go

#### **Vehicle Brokering** & Importing

- ✓ We have strong importing relationships in Japan to bring in sustainable vehicles
- Can offer to source and broker local options on your behalf
- ✓ Affordable and honest process

#### Tim Larsen (Japanese Cars)

03 365 6180 | jpnc@upstreamnz.co.nz www.upstreamnz.co.nz/use/JapaneseCars

#### Resources

#### Every EV you can buy in NZ (two vans introduced since Renault and LDV)

#### Hvundai Kona Electric

#### Hyundai Icong Electric

#### LDV EV80 Van / Cab

#### EV's that outperformed their ranges

#### Are Electric Vans a Viable option for NZ

#### Hyundai X Kia Electric Van to come

#### **WLTP** range info

#### **ANCAP TESTING**

#### **Outlander PHEV Specs**



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