Successful fleet electrification requires planning

Our Transition Planning Report, customised for your business, is your comprehensive, independent guide for success

Next: Benefits for fleet operators

TRENT ENERGY

Benefits of our Transition Planning Report

✓ **Unique**

No other service offers such comprehensive, actionable information.

✓ **The full picture in one report**

We bring together information from at least 7 different domains that are important to this transition.

✓ **Independent**

Unbiased by vendors and technology, our report transparently presents data, reasoning and options.

✓ **Follow through solutions and support**

We design, deploy and maintain your onsite solutions for a successful transition

Next: Sample report

Sample Transition Planning Report

A European B2B rental company with 10+ years in the business. They operate a fleet of 7.5-ton trucks for deliveries and collections.

Client motivated to use electric vehicles due to customer demand and the opportunity to use low-cost, stable transport solution.

Our recommendations for *the client*

Electric vehicle specification recommended
120 kWh capacity, 22KW AC onboard charger

Charger specification recommended
22 KW AC charger

Charging routine recommended
Overnight charging with optional mid-day top-up

Site compatibility confirmed
Start upgrade planning today for the 3rd vehicle transition

Recommendations in the report
Compatible vehicles, chargers, energy tariffs, smart charging solution benefits, onsite battery storage solution benefits

Benefits quantified

No operational changes to transition 4 of 5 trucks

Up to **70% Cost savings** on fuel, maintenance

Up to **25% lower TCO** compared to diesel vehicles

Next: Analysis of client's current operations

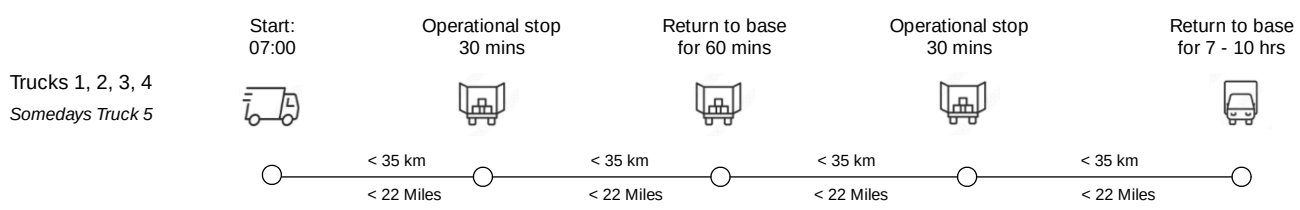
4 of 5 existing trucks operate a similar routine and are ready for electrification

Routine 1, followed by 4 of 5 trucks involves < 130 km daily usage, one mid-day stop at base.

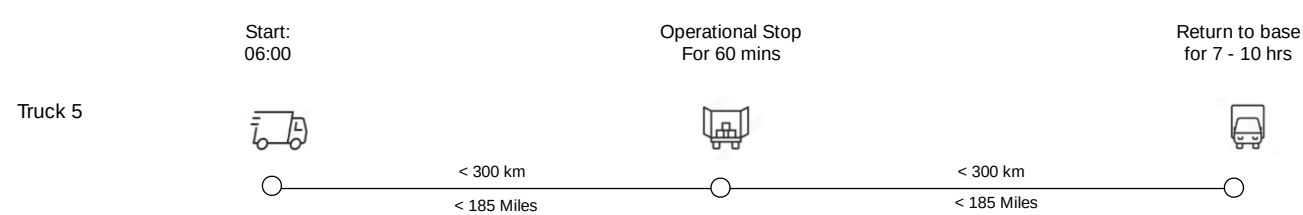
Routine 1 shortlisted for further analysis and transition simulation.

Analysis of current routines

Routine 1



Routine 2



Next: Electric vehicle options and simulations for Routine 1

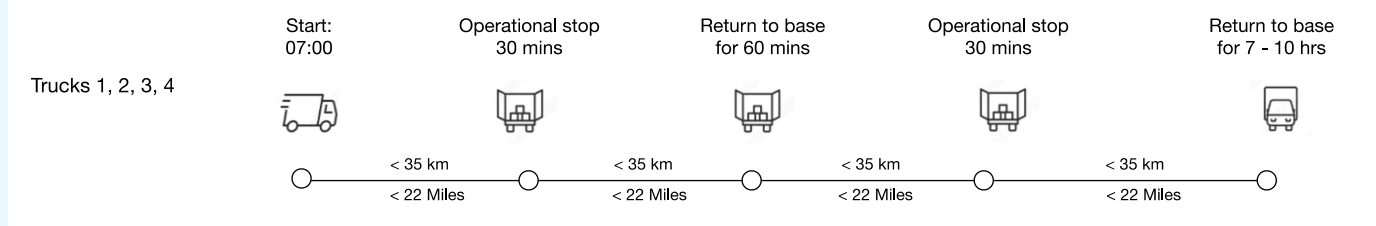
A truck with 120 kWh battery offers the best operational reliability and flexibility for the client

Vehicle with smaller battery (80 kWh) will require a mandatory mid-day recharge

Mid-day recharge would be optional on vehicle with a larger battery (120 kWh)

Vehicle options - Simulating charge levels

Battery charge level during Routine 1



With 80 kWh battery	100%	63 - 73%	Arrive: 26 - 46% Mandatory mid-day charging Depart: 80 - 85%	40 - 55%	15 - 25%
With 120 kWh battery	100%	75 - 82%	51 - 64%	45 - 55%	5 - 25%

14 different parameters simulated such as vehicle performance weather, terrain, road type, traffic, driving styles, battery degradation, stop durations

Next: Charging routines simulation

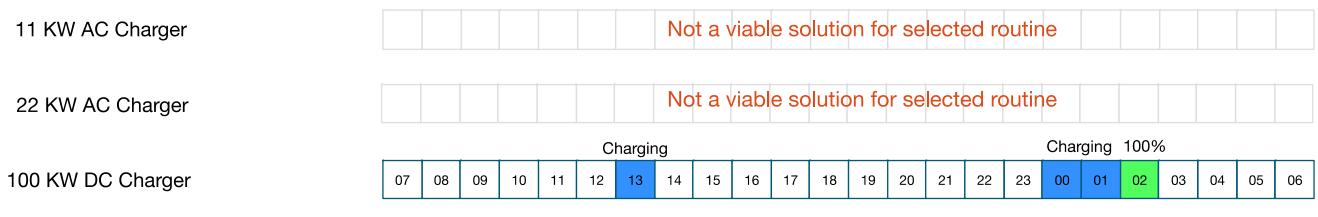
22 KW AC Charging delivers the best operational results with excellent cost balance

AC charging option is only viable for this business if the vehicle has a larger battery size (120 kWh)

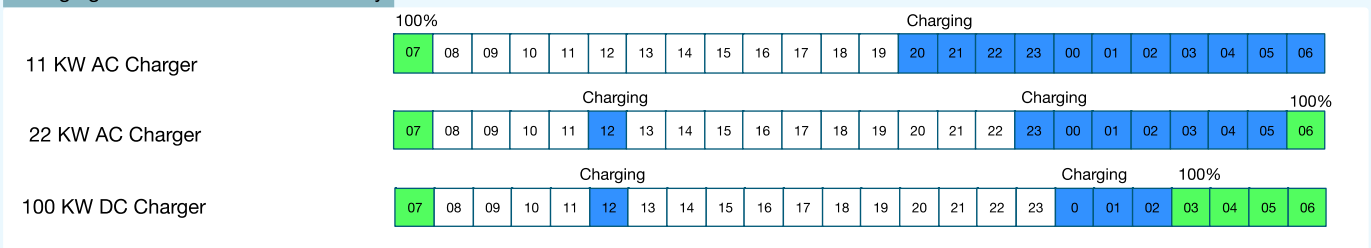
100 KW DC charging (mid-day) is mandatory for vehicle with lower battery size (80 kWh)

Charger options - Simulating charging routines

Charging vehicle with 80 kWh battery



Charging vehicle with 120 kWh battery



Next: Charging costs and savings

22 KW AC charging delivers more than 30% savings and excellent levelized charging costs*

Dynamic electricity tariff + Smart Charging essential to maximise savings

Delaying charging start time can deliver savings on most days. But departure linked charging delivers even more savings and greater certainty

Expected cost savings with Smart Charging

Costs and savings per vehicle per year	Current tariff	Dynamic tariff + delayed charging	Dynamic tariff + departure charging
11 KW AC Charging	£/€ 6,000.00	20%	28%
22 KW AC Charging	£/€ 6,000.00	27%	34%
100 KW DC Charging	£/€ 5,700.00	50%	50%

Next: Site readiness assessment

Site can already support charging for up to 2 vehicles

A 3rd vehicle could also be supported by including a mandatory mid-day top-up

Site power supply upgrade or Stationary Battery essential for DC charging

Expected cost savings with Smart Charging

	1st Electric Vehicle	2nd	3rd	4th	5th
11 KW AC	Site ready	Site ready	Site ready	Site ready	Grid upgrade Battery storage
22 KW AC	Site ready	Site ready	Grid upgrade Battery storage	Grid upgrade Battery storage	Grid upgrade Battery storage
100 KW DC	Grid upgrade Battery storage	Grid upgrade Battery storage	Grid upgrade Battery storage	Grid upgrade Battery storage	Grid upgrade Battery storage

Next: TCO benefits

Up to 30% savings on TCO

Savings available despite higher purchase cost

More electric vehicle usage = more savings, lower TCO compared to Diesels

TCO savings and breakdown

	7.5 ton Electric vs Diesel	
Vehicle + charger costs	+ 50 to 60%	Average list price
Government subsidies	- 13 to 15%	Towards vehicle and charger
Savings on business tax	- 21 to 24%	Year 1 tax benefits available
Savings on fuel costs	- 60 to 65 %	Includes smart charging benefits
Insurance and breakdown costs	+ 10 to 15 %	
Savings on annual service, maintenance	- 60 to 70 %	
5 year TCO savings for *the client*	- 20 to 30 %	Compared to a Diesel equivalent

Next: Our recommendations

Summary of our Recommendations for *the client*

- ✓ Vehicle with 120 kWh battery
  For operational flexibility, battery degradation impact, higher residual value
- ✓ 22 KW overnight charging
  For 30% cost savings on electricity
- ✓ Optional daytime top up when at base
  Maximises vehicle reliability and operational flexibility
- ✓ List of Compatible vehicle and charger models included
- ✓ Two-week trial of chosen vehicle
  Trent.energy will assess data for trial conclusions
- ✓ 6-month operational use with 1 or 2 vehicles
  Trent.energy will assess operational data for optimisation
- ✓ Dynamic tariffs and Smart charging options included
  Trent.Energy compares cost of various tariffs

Get your customised
Transition Planning Report
www.trent.energy