



TISBURY ELECTRIC CAR CLUB

Reflections on setting up and running a rural community car club as a member of a Europe-wide platform cooperative. How we did it and how others might.

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Summary

During the course of the Power to Change grant Nadder Community Energy set up Tisbury Electric Car Club to better understand the car club model as a potential new source of revenue for community energy organisations.

We found that at the rural level, car clubs are unlikely to contribute to the community energy organisation treasury. However, they add to the community energy organisation by way of contributing to the transition to electric and shared mobility and through engaging with and improving the lives of stakeholders beyond their investor demographic i.e. the role of the community energy organisation as a contributor to community resilience is enhanced.

The challenges to breaking even with a telematic-enabled model are: the time it takes to build the market for the service; time to develop a user base (this includes pricing to reduce friction); and the high costs of infrastructure and non-variable costs.

Developing and scaling the business model

It was clear from the outset that individual car clubs are not financially viable, but the assumption was that they would become so with scaling to around 6 car clubs of 2 cars each.

Our pilot period was designed to both test the assumptions in the preliminary figures while developing a network for achieving the scale at which we envisioned this would work. We worked with a range of partners in the community energy, community transport, and disability transport sectors to develop a network model supported by the interests of particular user groups, and the statutory financing available to some of them e.g., disability transport allowances. This work and the resulting network is an outcome of our work, alongside our partners. The model is continuing to be developed, although as Tisbury is a rural location with ample provision for disability transport, we became ineligible to be part of the network we established to take the business model forwards. We hope that this network will establish another strong central core able to operate the backend to support its operations with other Community Energy Groups running car clubs in areas with other community based organisations and insufficient provision for transporting disabled people. This very ambitious project meets the shortfall in funding for central operations during the aforementioned market education phase, through connecting with statutory finance available for specific user groups at various statutory levels.

Whether this comes to pass is still to be seen.

As the model is now under new leadership and consideration by a charity, we are limited in how much detail we can provide, though we are hopeful that they will succeed and create an infrastructure and ownership model that is accessible to groups like ours.

Revenues: From model based to community led model.

Initial modelling was based on figures from CoMo. The reality, influenced in part by Covid, but also the stage of development of the market and its demographic features, meant we did not meet the assumptions in the original plan.

Those figures, to our mind, represent a mature car club in a more densely populated area; areas with lower private car penetration; and/or a potential user market that is more populated by the earlier segments of the adoption curve (innovators and early adopters).

In practice, rural areas, which we aim to serve, have a different demographic mix. Not only is there a lower density and older population, but also higher private vehicle ownership, and a higher proportion of people in the late majority and laggard segments of the adoption curve.

Belonging to a rural electric car share model requires changing behaviours and changing mindset. We underestimated how long this would take, though the additional uncertainty of a population also adapting first to the pandemic, and then “the new normal,” may have contributed. Indeed as we emerge from the pandemic (so far) interest continues to rise and despite a slow start we are now approaching the membership numbers we had targeted.

Our response to the slow adoption has been to reduce the friction as much as possible by offering very accessible prices for both membership of the club and hourly rental rates. The strategy for growth is to build the community around the car club with very low barriers to belonging underpinning the sense of place.

As the community matures, we will then look to decide collectively where a tolerable price point is, on the understanding that there are financial parameters within which the decisions have to fall to maintain the club’s viability.

As is evident above, while the grant period of the car club is concluding, the car club is still very much a live experiment that we hope will be able to create a better understanding for the Community Energy Group on how to operate a car club and create better models for a larger collective endeavour. We know there is still an appetite for a network of car clubs supporting each other and some of our partners are working on an approach to parish and town councils.

With regards to actuals versus predictions, the business model as originally presented does not resolve even for a larger car club. Membership and usership is continuing to grow to the projected 60 members. Most citizens change their vehicles on an 8 year cycle, so there is a long lag built into their decision making loop around car options. Some of our members have expressed that they were at the stage of reexamining their transport options and that this is when they considered joining the club and for example, not replacing their second vehicle. We hope as these cycles continue to mature on a rolling basis, that members will continue to join. If the UK Government transport strategy related to eV infrastructure is implemented in a timely fashion and well communicated, lag time may reduce.

At TECC we are now paring down the costs to a skeleton volunteer team in which at least two people will be trained on managing the infrastructure. At the same time we will continue to raise sponsorship from local businesses, grants and community fund-raisers to top up the shortfall between revenue generated and costs estimated at £10,000 per annum for two vehicles.

Learnings

Testing before committing: During the early stages of setting up a car club, building up the community of interested parties first is vital with conversations about how much members would use the car and how much they would tolerate in terms of price. Our community surveys showed great interest but the conversion from expression of interest to membership and driving regularly has been lower than anticipated in the time available due to the aforementioned challenges.

- Alternative models to probe before committing capital:
 - **P2P platforms** - AirBnB for your car. These platforms charge variable rates depending on the insurance score of the individual. As a mechanism for serving the underserved they are limited compared to community owned cars but community level agreements with the vehicle owner may be able to work around this. There is also a question of where the profits go and the interests of the parent company/ venture capital behind them. However, as a way of establishing at low cost what the market is, this could work. This experiment can be run with a fossil fuel car to test and is already an improvement to build the base level understanding of transport use. This is trickier for the electric car element, as the faster chargers required to ensure cars are quickly available for the next user, are not generally available to homeowners as they require 3-phase electricity.
 - **Virtual car club:** members log their actual journeys on a shared calendar, ideally in anticipation of each booking to mimic the anticipation required. The log captures journeys by car, and those by ineffective or expensive alternative transport modes. After a defined period, an accurate picture of actual transport habits and overlapping needs would be established, to inform the demand and supply. The value of this approach would be to both establish the appetite, drive commitment and engagement of a core of interested parties. It would require an interested group to ignite as the alternative “build it they will come” approach is less work from a user perspective.

Revenue Opportunities:

- **Corporate memberships:** currently our insurance package does not allow journeys that are for business, so unfortunately this is not something we were able to offer during the period despite inquiries from two local businesses and the local parish council. Likewise, the cost of insurance for individual clubs is prohibitive due to reticence by underwriters to support shared mobility models. To move the insurance sector forwards, global leading insurance brokers and underwriters were targeted and strongly influenced to research and develop policies tailored for car clubs. After many months, a provisional new tariff (for all UK car clubs) has been achieved by this project working with Willis Towers Watson. Unfortunately, this came too late to benefit this pilot but the policy will come to market in Q1 of 2022. Beyond the original TOR, this is a significant additional outcome of this project and demonstrates that there is still space for innovative insurance models to disrupt the current insurance market.

- **Municipal/ corporate fleet management:** Although this would require more centrally paid capacity to service the full time support these entities would require, it is possible to generate revenue from housing associations, council buildings, businesses with fleets to make their vehicles accessible outside hours to the public, or even to manage their own driver base. This model has already been successfully trialled in cities so it would be interesting to evaluate in the rural context. There are, however, cheaper options for in-house drivers.
- **Community transport partnerships:** helping community transport organisations recruit new drivers and maximise on idle assets. Community transport vehicles may appeal to a different type of user, and/or make the car club generally more appealing by having a range of vehicles, for example wheelchair accessible or steering-wheel adapted among others. Community transport organisations probably have some of the infrastructure in place: eg maintenance, insurance, municipal relationships.

Capital costs

The Power to Change grant stipulated a preference for non-capital intensive projects, and this approach probably mimics the preference of projects where revenue is not guaranteed (as was the case with Feed in Tariffs, and also applies, albeit at a lower rate, to export tariffs or electricity sales).

The way we worked to this specification was two fold.

- Cars: chose cheaper, second hand vehicles
- Chargers: Subscriptions turning capital expenditure into fixed costs and higher variable costs

Electric cars

The second hand car market for EV's is in its infancy with limited supply (considering people have a typical 8 year cycle of car ownership) with cheaper cars of older models with range limitations impractical for a car club.

However, this was the route we pursued, in part because we did not want to commit beyond the grant period and incur liabilities before knowing whether the club would work. Shorter lease periods made the monthly costs unbearable, and lessors we spoke to were uncomfortable about using the cars for multiple drivers.

As a result we have one car with a top range of 70 miles, and a newer model with a top range of 170 miles. Range has not proven a problem for members, for whom the average mileage travelled per hire is around 20 miles. This is a function of geography and relative distance to the nearest urban hubs which may differ in other locations. Difficulties were encountered where members failed to charge the car, leaving the next user with a depleted battery.

Opportunity: At the individual car club level, there is little negotiation possible with car manufacturers or retailers, but a larger network of car clubs might benefit from the ability to secure a discount which would then allow them to sell the used cars after a couple of years and suffer only minor depreciation. If this could be achieved it would go a long way to both reducing capital outlays and the heavy impact of depreciation, and concordant car replacement on balance sheets. That said it is worth bearing in mind

that the need to maintain cars in a mint condition could lead to higher maintenance costs or making insurance claims (which need to be kept to a minimum).

Charge point infrastructure and operation

Even generous assumptions suggest a payback period in excess of 10 years for charge points and local modelling on current usage suggests it will take significantly more time, during which the hardware itself may well become obsolete.

During our grant period, we partnered with Charge My Streets to install a charge point that serviced both the car club and the public. As they were operating with Innovate UK funding, they could provide the service for a nominal subscription fee. For us this turned a capital expenditure into a fixed cost expenditure, which afforded agility at the beginning of the project. While community energy projects specifically may want to explore installing the infrastructure themselves, there may be a tension between installing hardware that needs kwh at higher charges and the car club that wants them at lowest possible costs. That said, when modelling, it is still the higher rate that should be considered, to turn capital into fixed costs.

Lagging infrastructure development will affect poorer people most:

The market will be slow to instal chargers in less profitable rural areas. This will contribute to the negative feedback loop in which rural areas are slower to adopt EV mobility options because neither the demand nor the infrastructure is present.

Part of the lower demand for onstreet facilities will be that there is a higher proportion of people in rural areas with off-street parking.

Less affluent people are less likely to have off street parking and so will rely on public charging. This will have implications for their convenience and extend time poverty, as they will have to negotiate sharing chargers. It will also mean they have to pay more for electricity that their neighbours with off street parking pay at a domestic rate exacerbating the negative impact..

In order to promote EV adoption (and facilitate EV car clubs), municipalities, community groups, and local businesses will have to take the lead in installing public infrastructure.

Municipalities in our (limited) experience are receptive, and have land assets. In our experience they also have access to 3 phase electricity. Both our charging locations are Wiltshire Council owned.

Train infrastructure localities would be a good fit for car clubs, as they are often a central location that can facilitate intermodality. Sadly it seems that as train infrastructure and property is managed centrally, these are assets that may be viewed in their totality as an opportunity for organisations operating at regional/national infrastructure scale, rather than responsive to local demand at individual stations. Again, this compounds the rural infrastructure gap to be overcome.

Smart Cars: when cars can interact natively with the software, the relationship with the hardware provider is no longer necessary. The Mobility Factory (TMF) platform is hardware agnostic. The ability to connect directly to cars will cut the non-variable cost of the hardware.

Telematics at scale: as The Mobility Factory meets its goal of adding 400 cars to the collective fleet, across 68 cooperatives by 2024, scale will come in to play reducing further the cost of the car club operations from 61 euros per month to 36 euros per month.

Customer Segments:

As the project evolves we have seen various types of members grow, some of them move between the segments, but these refer to the motivations for joining.

Initially there was a lot of interest and a flurry of membership signups from people who were **project supporters**. They like the idea of it in the village or support the principle of decreasing the total number of cars in production through material optimisations that shared ownership make possible, but who for differing reasons would not actually use the cars.

On average people look to replace their cars periodically. Another group of users see the **7 year itch** on the horizon and are reassessing their transport options. Within this group, some are aware that there is an imminent ban on internal combustion vehicles, are dipping their toes in the water, they are **community test drivers**. Some are considering a **wholesale replacement** of their second car with the car club car because “it’s just sitting on the drive, idle 13 out of 14 days”.

Rural car dependency is high as apart from the train - with its limited destinations – the public transport is also still geared towards the same destinations as the train and is infrequent. So there is a group of users who do have their own, perhaps degraded, vehicles that they need to use regularly enough that they are not ready to give up the priority and predictability of access. However, their dependence on transport and lack of reliable vehicle of their own means they **need a backup**. “My car had to go into the garage, but I still need to get to work.”

Day out drivers do not regularly use the cars but on occasion go on a longer drive. Some have left their car entirely, but others prefer the experience (or price if going to London) of the electric car.” The boys feel like it’s a spaceship and like going on days out in it”.

The group of **infrequent but regular drivers** seem to have given up owning a car (or prefer electric cars) for their regular journeys that take them beyond the range of public transport. These are often return journeys that take them beyond the range of the car. As a result they may be the users getting the most value out of the cars, but also most exposed to the deficiencies of the charging infrastructure.

Finally there is a small core of users who are **all in** on the car club, and every car journey they make is in the car club vehicles.

Value Proposition

The value proposition for the main user groups is similar: hassle free car hire in their area. The functionality is their primary interest. The less regular users are enjoying or exploring the technology while supporters are explicitly motivated by the environmental benefits.

Customer Relationship

The research by CAG consultants highlighted the importance of the close relationships we have with members. They all receive an induction from an existing member – generally the chair of Nadder Community Energy or the Tisbury Electric Car Club lead. The support line goes to the TECC lead who is able to answer most queries on the spot drawing on his experience of driving EVs – and using the car club cars as a member of the **wholesale replacement** group.

The personal care has also involved helping people find their DVLA codes, or walk them through the process on the phone and issuing invoices in formats that they were comfortable with paying.

Channels

There are a variety of channels in the village. There is a community parish magazine **Focus**, in which Nadder Community Energy has a regular column, which is periodically used to remind readers of the electric car club. Given the rolling nature of people coming to the end of their relationship to their existing cars, it is worth maintaining visibility.

During periods when we were trying to drum up membership we carried out flyer drops, as well as posting flyers on prominent telegraph poles (informal notice boards) - and actual notice boards.

There is also an active community Facebook page where we promote. Our twitter presence is not very active, but doesn't feel particularly relevant to the local context.

Key activities

On a day to day basis the main tasks relate to onboarding members and responding to their needs. This involves everything from processing their applications, to inducting them, to being available as a customer care centre.

More critical, but less frequent, is the maintenance of the relationship with insurers and with the rest of the platform co-op which runs the booking and access (telematics) technology that allows users to make reservations and open and close the cars.

Key resources

Central to the ability to run this as a community is the membership of The Mobility Factory – a platform coop that develops and maintains the technology. Through this we are cooperative shareholders in the technology. This is important as other car clubs have experienced their technology platform be bought out and denied access. It is also a model that allows us to communicate with other car clubs around Europe, and has the promise of allowing interoperability across lots of communities.

Key partners

The Mobility Factory is both a resource and a partnership.

The large capital expenditure around charging infrastructure would not be possible without working with installation and management partners Charge My Streets.

We were also fortunate to have responsive local government at both parish and county level who facilitated cheap space hire and access to electricity infrastructure.

Costs

Our running costs are kept relatively low currently by running as a volunteer group. This is justified in part by the low day to day workload. The need to be available most days to answer the customer support centre phones would not be financially viable to pay and not good value. The calls are infrequent.

The main costs are insurance and the booking and access platform fees.

Revenue

Revenue comes from membership fees. Currently we are still in the early phase of market education and so this is very low - £10 per year per member.

Revenue also comes from hourly hires. Again these are currently subsidised to reduce the friction users experience joining.

Local business sponsorship also accounts for about 1 tenth of our operating costs.

A map of the developmental stages of different elements of the model.

