

# Bruny Island Energy Forum

March 2020

A decorative graphic consisting of several overlapping, wavy, translucent bands in various colors including purple, blue, green, yellow, and red, flowing from the bottom left towards the right side of the page.

# Agenda

- The CONSORT project: learnings and outcomes
- The cable: Current status, future plans
- Round table discussion

# Trial on a page

ARENA funded

Under Research & Development round

~7.9m total value. \$2.9m ARENA funding

April 2016 – April 2019

3 year research/2 year trial

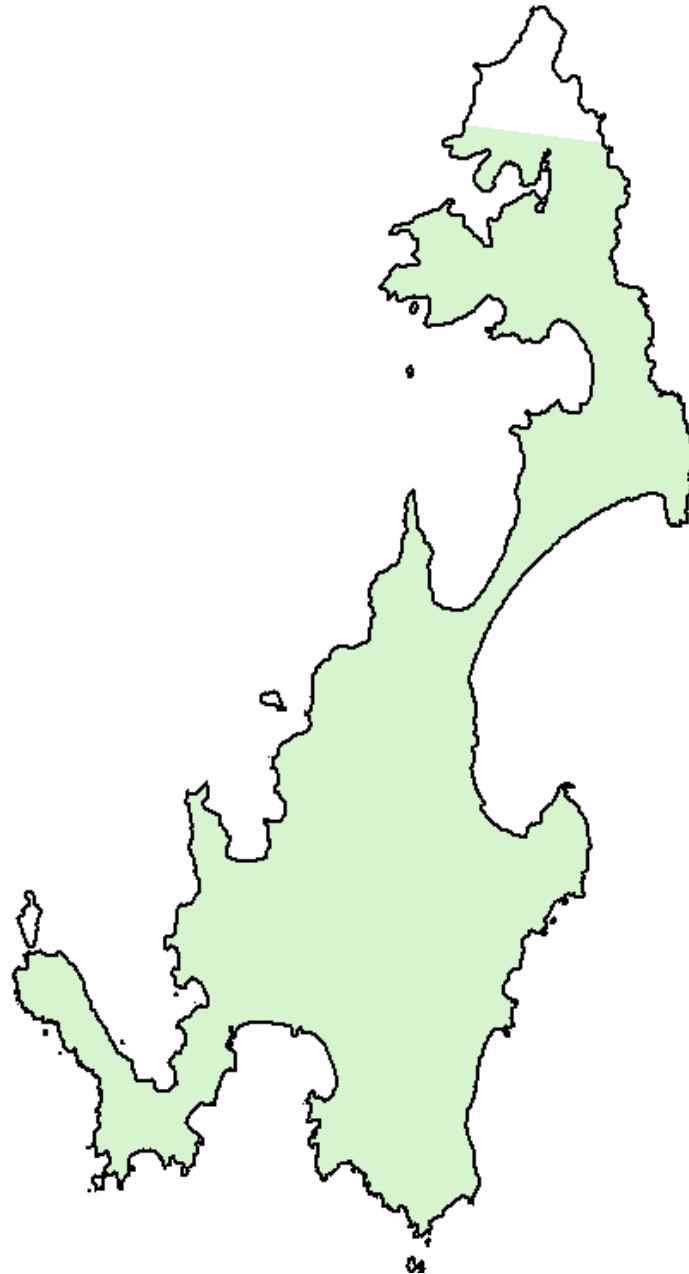
Manage cable load and Diesel use

Collaboration: ANU, USyd, UTAS, Reposit Power,

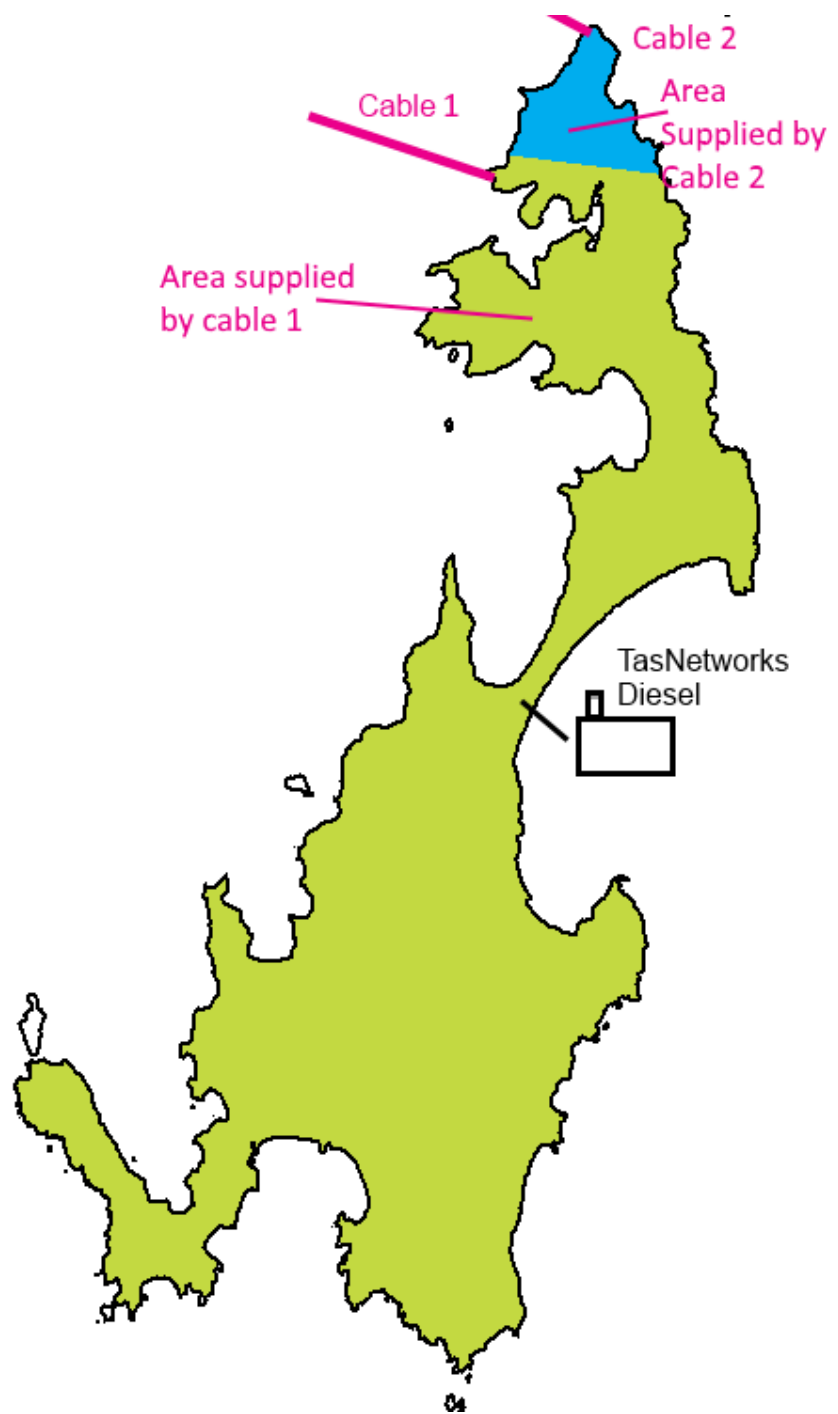
TasNetworks

~150 kW battery capacity

~35 customers



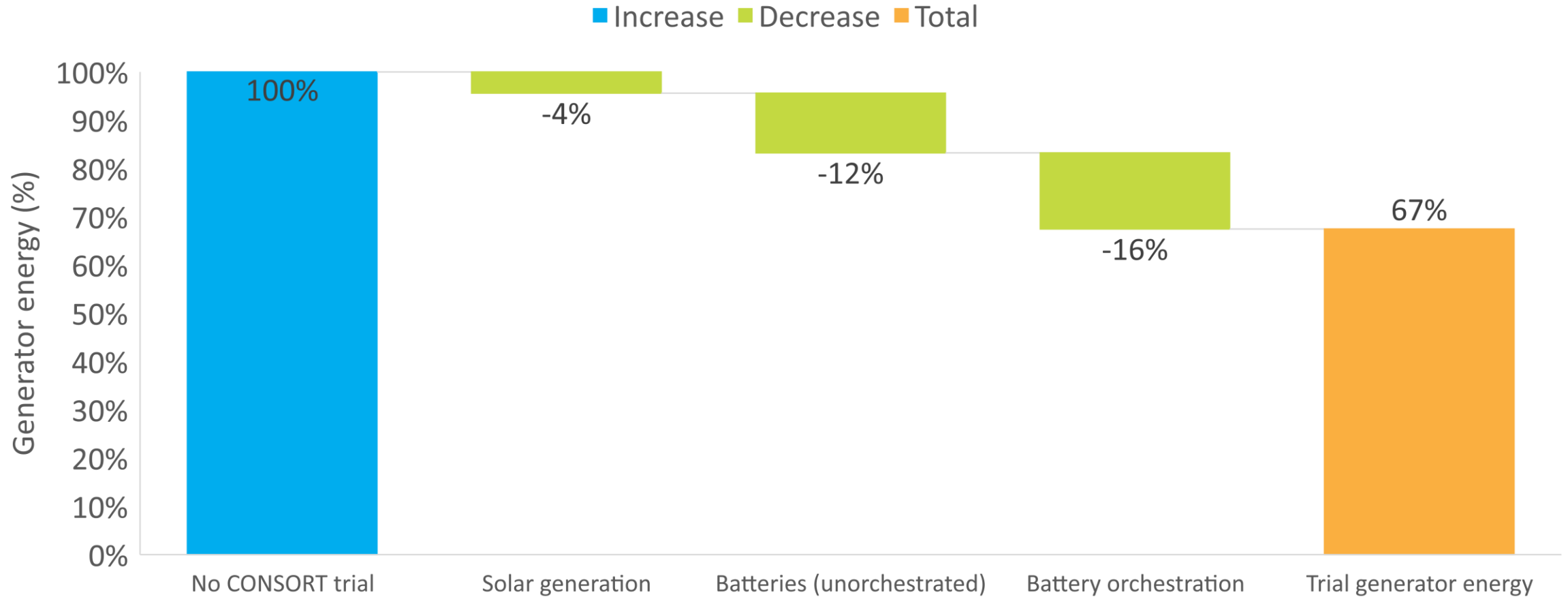
# The network



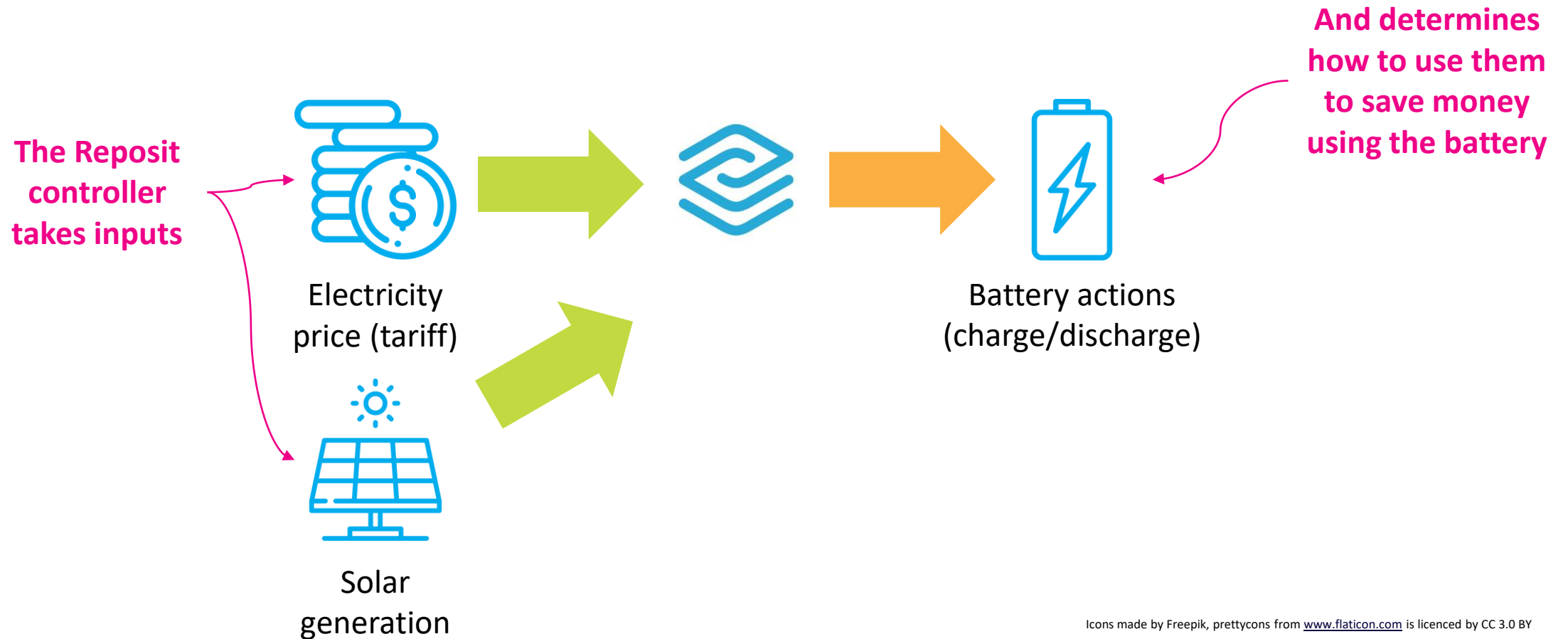
# Installation



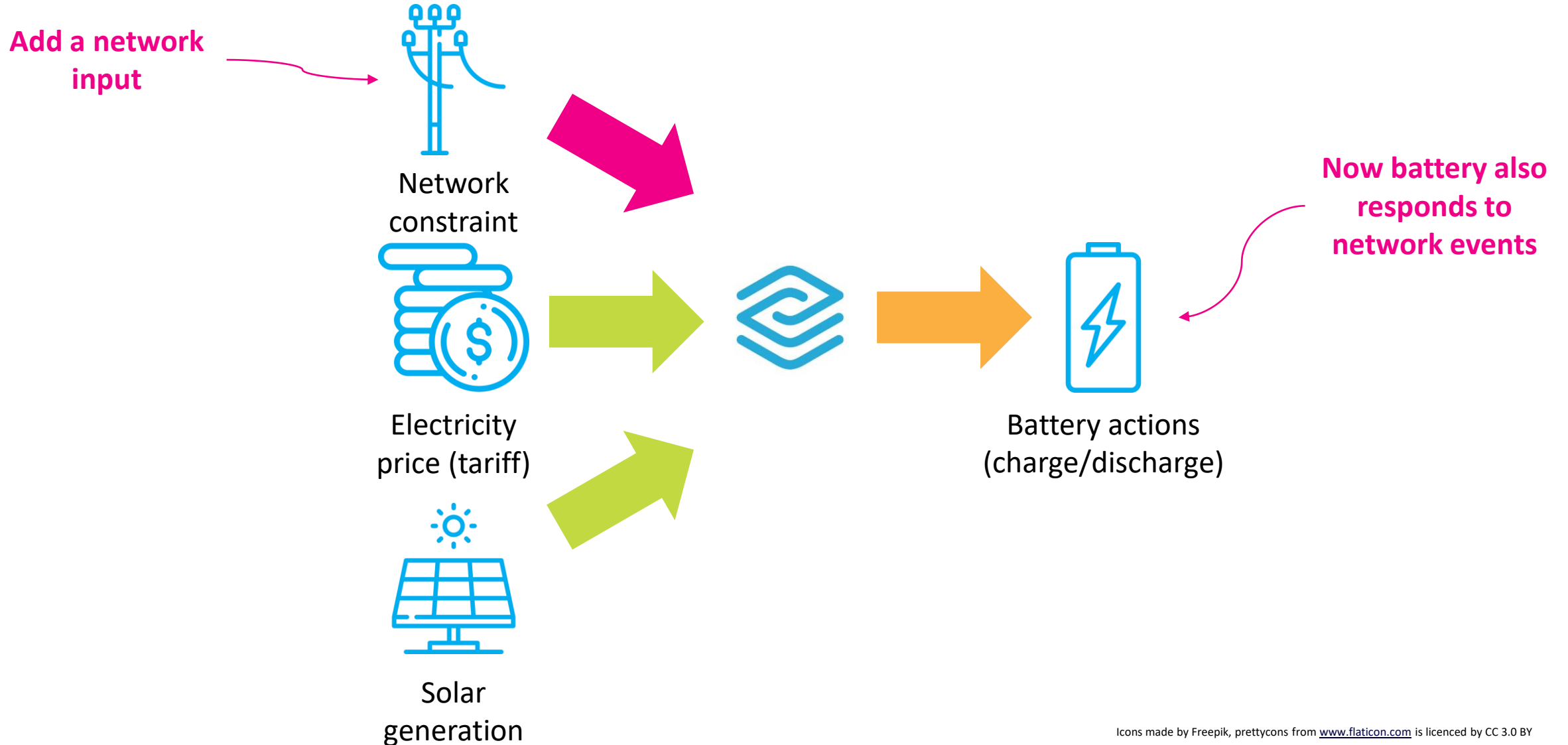
# Technically: how did we go?



# Controlling a battery for fun and profit



# Controlling a battery for fun and profit – network version





# Value-reflective payments

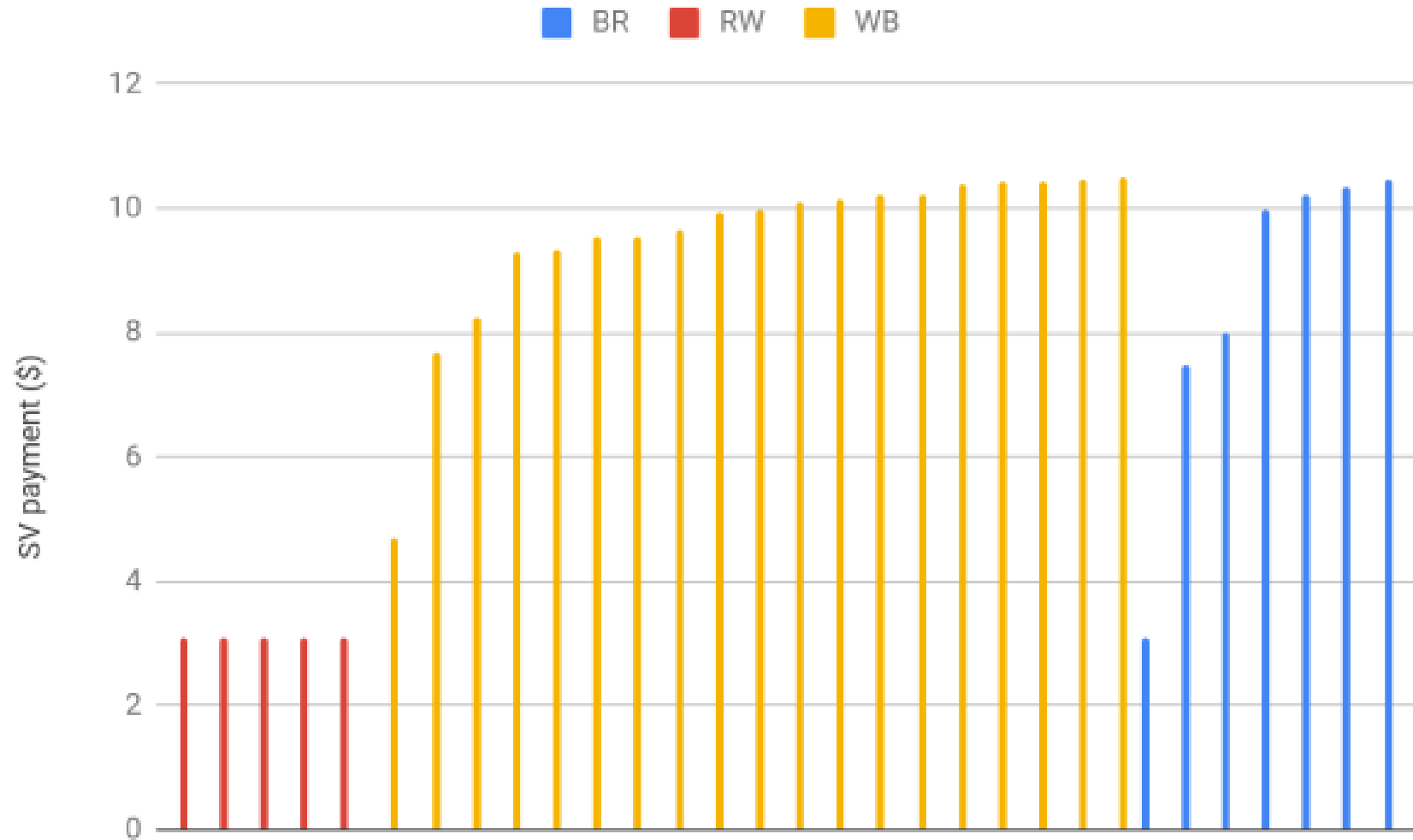
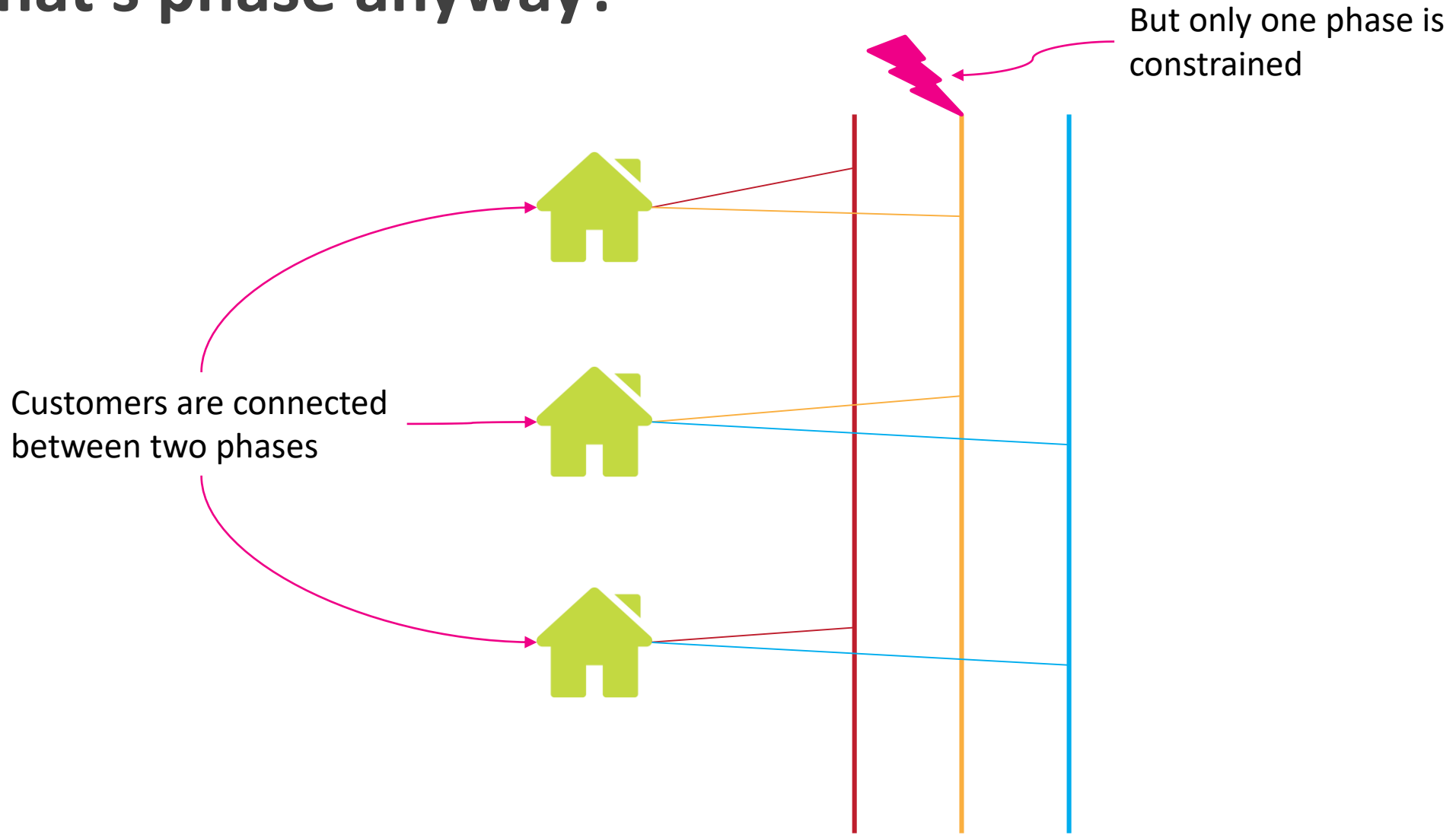
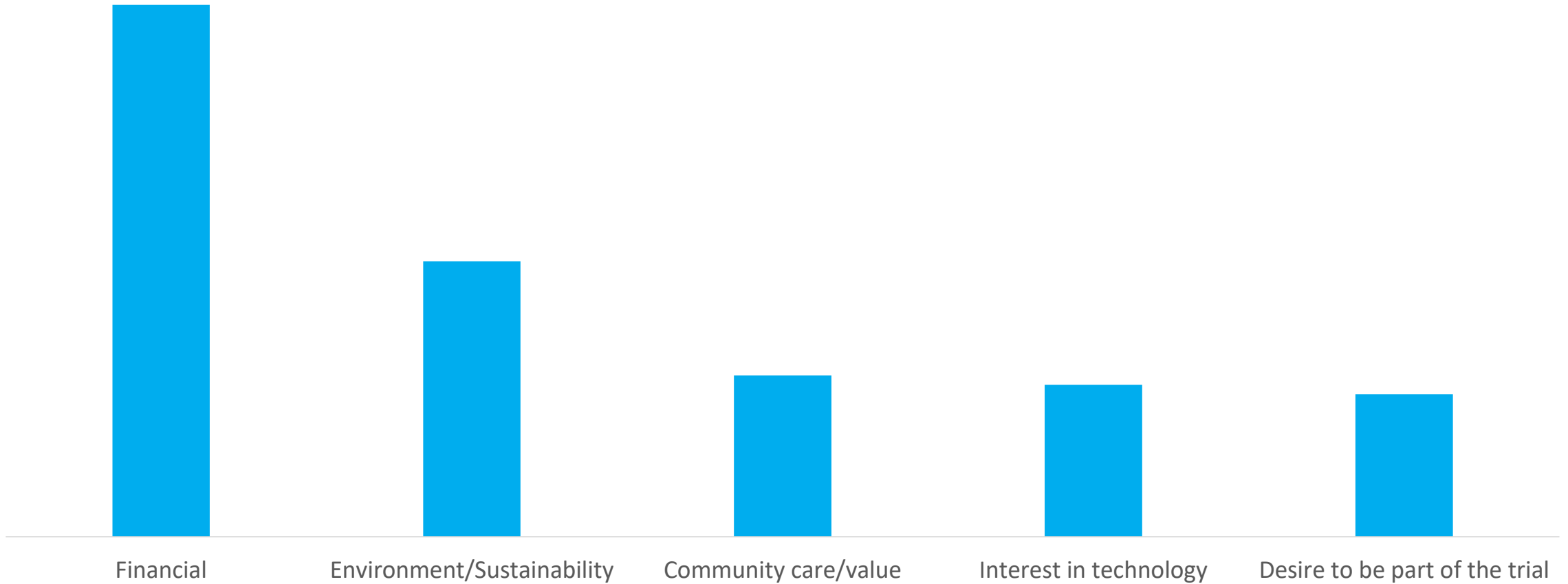


Figure 3. Shapley value payments by phase for the morning of Sunday 10 June 2018.

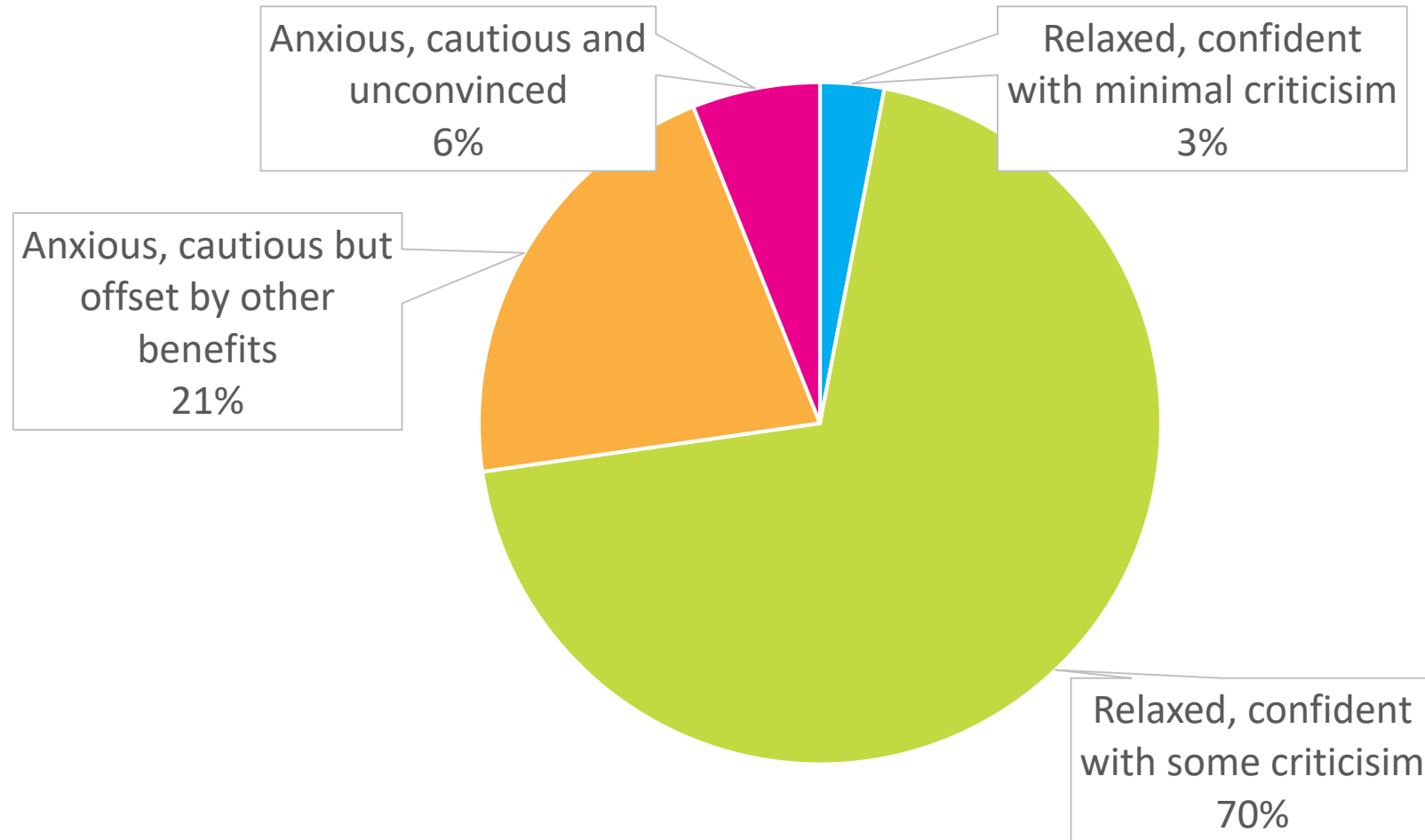
# What's phase anyway?



# Why participate? Drivers



# And how did you feel about it all?



# What's next – for demand response

- Operationalisation
  - ↓ Reduce cost
  - ↑ Increase diversity of sources
- Explore other parts of the network
  - East coast

# What's next – for Bruny Island

- Participants → Customers own Solar/battery systems. While cable is being replaced demand response is still valuable
- Cable failure/future plans → Michael will talk about

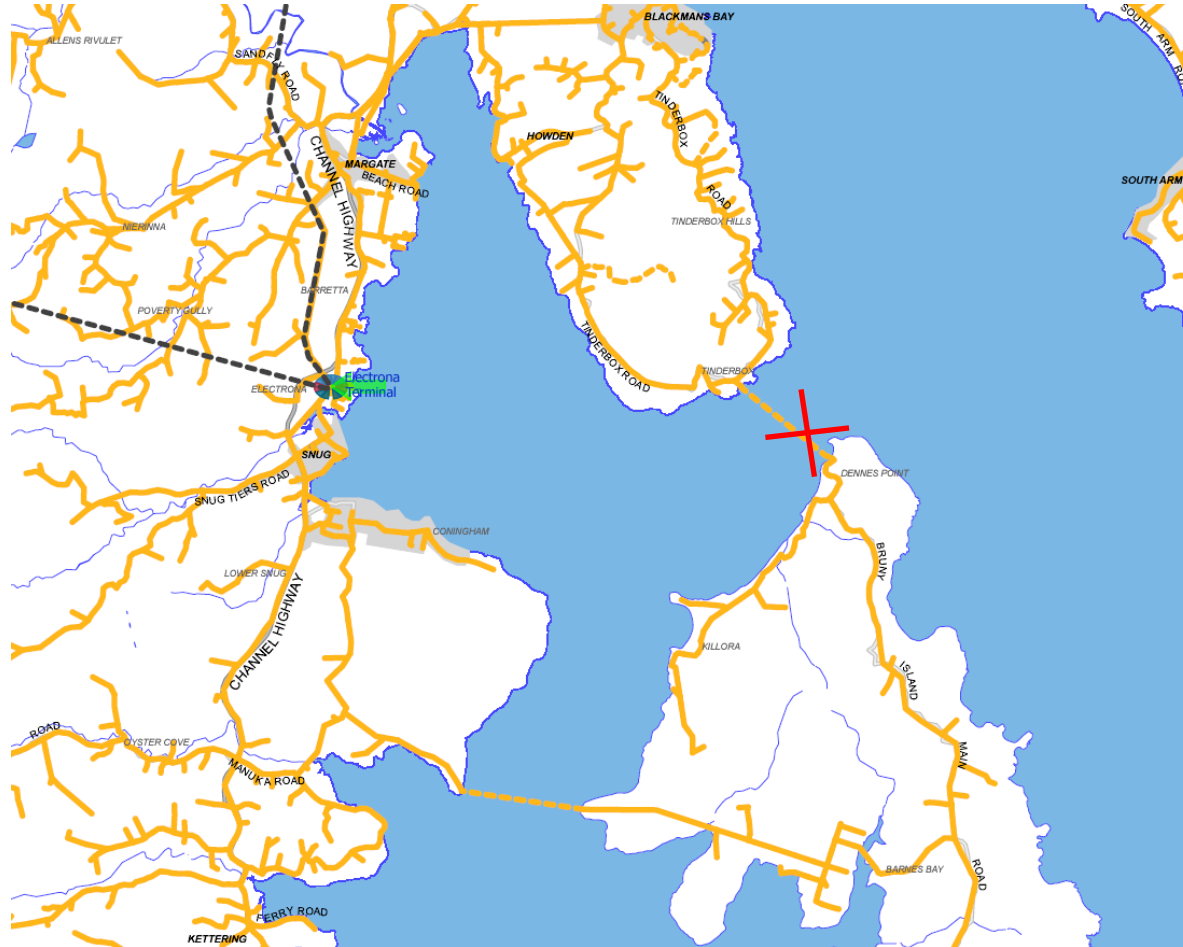
# Cable Failure

What happened, what's next

Presenter: Michael Verrier – Senior Asset Strategy Engineer



# Tinderbox-Dennes Point 11kV submarine cable fault





# Tinderbox-Dennes Point 11kV submarine cable fault

- On Saturday 2<sup>nd</sup> November, a red phase to earth fault occurred
- Testing confirmed that the fault was within the submarine cable.
- Divers were sent down to investigate at estimated location.
- What they found.....

# Tinderbox-Dennes Point 11kV submarine cable fault



Faulted section



Original cable sample

[Video of suspect @ 13:26](#)

# Tinderbox-Dennes Point 11kV submarine cable fault

- We have mobilised additional diesel generators to support the island under contingency situations.
- We have recently installed more remote operated devices on Bruny Island which will assist with faster restoration times should a fault occur.

# Tinderbox-Dennes Point 11kV submarine cable fault

- There is a need to replace the failed cable now to return to a secure supply arrangement.
- We have sent divers down to inspect and report back on the remaining in-service cable.

# Tinderbox-Dennes Point 11kV submarine cable fault - replacement

- Lots to consider, including;
  - Marine survey (Bathymetry)
  - Geotech survey
  - Heritage, aboriginal and environmental considerations
  - On-land considerations
    - Feeder and substation demands
    - Route/s
  - Constructability - Specialised installation method and crew
  - Operability
  - Maintainability

# Tinderbox-Dennes Point 11kV submarine cable fault - replacement



# Future plans

Presenter: Michael Verrier



# Future plans

- We are still undertaking preliminary investigations into maintaining security of supply to Bruny Island
- This includes investigating replacing the second cable and alternatives.
- We are committed to engaging with all stakeholders once there is more information to share.
- And expect we will be in a position to share more information on the failed cable replacement with you again early in the new financial year



# Future plans

- You can contact our customer contact centre at any time on 1300 137008 to discuss further with us.

# Discussion starters: questions

- About CONSORT
  - Did any learnings surprise you? Is there perspective you can add?
- About demand response
  - As our only active demand response scheme: Can you give us any thoughts on a wider rollout?
- About the cable failure:
  - Any burning questions on future Island supply needs?

Thank you

