“Case Study”

Location

Organization:	Head of Dept. ?

Image

How

XXX

Where

XXX

What

XXX

Who

XXX

Environmental Justice Aspect

Conclusion/LGA Indicators

- XXX

Main Goal	Policy | Technology
	Community | Region | National

RES | COM | TRA | IND

Energiesprong

The Netherlands

https://energiesprong.org/

Organization:	Energiesprong

How

Energiesprong starts off with a pilot program in an area to determine if the project would work before advancing to larger retrofit projects. Some technologies used in these retrofits include prefabricated facades, insulated rooftops with solar panels, smart heating, and ventilation and cooling installations.

Where

A strong business minded approach is taken when determining where to add these retrofits, targeting where Energiesprong sees opportunity or a housing bottleneck. Originally, buildings part of a housing association were used as many had similar designs, streamlining the retrofit process as mass-producing the parts for the retrofit were made simpler.

Why

The goal of Energiesprong's Netherlands project (called Stroomversnelling) is to increase the amount of Net Zero Energy (NZE) buildings in the Netherlands. Along with this, they had goals to reduce the price of NZE renovations, increase the populations acceptance of NZE renovations, and increase the rapid growth of the NZE housing market. The decarbonization of the environment in the area is also a benefit as the reduction of fossil fuels can be seen.

Who

Collaboration is done between housing organizations, policy regulators, financial institutes, and Energiesprong's market development team to ensure the retrofits are affordable, and realistic. Once the market conditions are fulfilled, companies can invest and develop scalable net zero energy retrofits.

Environmental Justice

Although Energiesprong mainly targets single family homes, they are expanding their portfolio to include renters who are located in apartments

The payment for these upgrades is done through an energy service plan where occupant's pay the equivalent of their previous energy bill for the new energy and price of the upgrades

Main Goal	Policy | **Technology**
	Community | Region | National

RES	COM	TRA

LGA Indicators

- Targeting LGA's which experience harsher climate (in terms of hot and cold) with retrofits will provide the most benefit
- Look at large amounts of residential emissions per capita as another indicator which could be useful in narrowing down

Local Law 97

New York City, USA

Organization:	NYC Government

https://www.nyc.gov/site/sustainablebuildings/ll97/local-law-97.page

How

The main aspect of the law is the increasingly stringent carbon emission limits put on these buildings starting in 2024 and continuing to 2050. There is flexibility to comply with these restrictions, where if retrofits cannot be done in time, renewable energy credits or emission offsets can be purchased. There are penalties in place to incentivize those who may not want to follow the law.

Where

This law affects **all** buildings in **New York City** which are over 25,000 sq ft.

Environmental Justice

There is a lot of flexibility with the compliance for this law. One example includes the fact that some affordable housing buildings can buy low-cost energy saving methods instead of the normal emission credit.

Why

The goal of Local Law 97 is to slowly increase emission restrictions in New York City to the year 2050 where emissions for large buildings (25,000 sq ft and larger) should be at net zero. This law is expected to target more than 50,000 separate properties in the City. Specifically, it is targeted towards buildings as they account for about two-thirds of New York Cities carbon emissions. This law is alongside New York's 80X50 plan, which aims to decrease emissions from every building 80% by 2050.

Who

This project was put forward by NYC's Mayor. The people who would make the change would be the owners of the buildings, either investing in retrofits or purchasing renewable energy from NYC to be used in their buildings.

Main Goal	**Policy** | Technology
	Community | **Region** | National

RES	COM	TRA

LGA Indicators

- Areas with a large amount of larger scale buildings is where this solution will best be implemented
- Look for more metro or outer metro based LGA's where large buildings will be much more common
- Look for LGA's that contain CBD's or other large scale epicenters

Solar Panels For Renters

Australia

Organization:	Allume Energy

https://allumeenergy.com/uk/solshare/

How

SolShare works by directing power from a rooftop solar system on a shared roof to participating tenants behind the meter. SolShare allows for the equal distribution and sharing of solar energy for each unit. This is possible by distributing power on an on-demand basis depending on each unit's energy load. Each apartment within the building is equipped with a monitoring device that feeds energy usage information to the SolShare unit. Any excess energy not used by the apartment will be returned to the grid and the electricity retailer will provide proper compensation.

Where

Allume is based in Melbourne, Victoria but has spread throughout Australia and to other parts of the globe. Allume's approach to solar energy is largely want based as a landlord or tenant must go through the process of implementing this technology. Although there is a focus on renters, this technology is applicable for any multi-dwelling building such as office buildings and retail centers.

Why

SolShare aims to bridge the gap for renters that are seeking renewable energy solutions and retrofits. Renters in Australia have little power in making permanent retrofits to their apartments and must consult their landlords before making most changes. This process can be discouraging and lengthy and could deter renters from pursuing sustainable living options.

Who

Allume specifically targets renters looking for renewable energy options and landlords looking to promote sustainable living options. Although we place emphasis on SolShare for apartment buildings, the same concept can be implemented for any multi-metered building with a shared roof. This could include office blocks and retail centers.

Environmental Justice

Helping renters and people in social housing have access to solar power. Can help to reduce energy bills.

Main Goal	Policy | **Technology**
	Community | Region | National

RES	COM	TRA

LGA Indicators

- Easier to implement in LGAs where Strata committee only needs majority vote to implement SolShare.
- LGAs with local grid stability in order to compensate for the energy load produced by solar.
- Allume is already somewhat established in New South Wales, Victoria, and South Australia.

Plug in BC

British Columbia, Canada

Organization:	CleanBC

https://pluginbc.ca/go-electric-fleets/charging-infrastructure-incentives/

How

This plan allows for businesses and homes (including multi-family rental buildings) to get up to 50-75% funding via rebates to purchase charging station. There are certain regulations you must follow to get the chargers including charger purchase and permanent installation.

Where

Anyone who follows the qualifications listed is eligible to apply for the rebate. This is a possible solution that could be implemented anywhere such as in an area of poor charging infrastructure, or an area where the role of EV's can grow.

Why

Australia has a disproportionately low amount of EV chargers per the amount of EV's that are on the road. Increased amounts of chargers will be a form of promotion for those who are hesitant on getting an Electric Vehicle.

Who

The government puts the rebate plan out as a policy, but power is ultimately with the people. There are certain documents you must show proving you have approval from the landlord and are legally allowed to use the electrical power that the charger would require. If such proof is submitted, the rebate will be given to permit installation.

Environmental Justice

Part of this policy specifically gave special benefits to indigenous groups, which can get 100% of the charging station installation paid for (up to $6,000)

Plug in BC

Main Goal	**Policy** | **Technology**
	Community | **Region** | National

RES	COM	TRA

LGA Indicators

- Look for LGAs with high transportation and gas emissions
- Target areas with an indigenous population who could be specifically assisted
- Communities with multiple group-housing complexes could be specifically assisted
- Target areas with less access to public transport that may rely more on cars (Hopefully EV's)

Yackandandah Microgrid

Yackandandah, Australia

https://totallyrenewableyack.org.au/

Organization:	TRY (Totally Renewable Yackandandah)

How

So far, TRY has generated three operating microgrids, multiple solar and heat pump hot water offers, a community virtual power plant, and a 274 kWh community battery. For the remaining 40% of the grid that needs to be completed, solar and wind generation will locally sourced if possible. Such types are the main contenders for energy generation and will be assessed by Mach2.

Where

TRY has settled on a local area footprint that was determined by the electricity feeder that supplies all the loca properties. Establishing electricity facilities within that feeder area means the town can potentially continue to supply its own power. This makes the area ideal for the implementation of microgrids.

Why

The goal of this microgrid was to first and foremost, reduce carbon emissions. It also was helpful in developing greater resilience for the town during extreme weather and natural disasters. It provided a cost effective and resilient 100% renewable power supply for the entirety of Yackandandah, so they didn't have to rely on outside power sources.

Who

TRY is the small community behind Yackandandah, which consists of a band of volunteers. Their funds are provided by the Department of Industry, Science, Energy and Resources. They have partnered with a local firm, Mach2 Consulting, to manage the project and undertake the financial feasibility.

Environmental Justice

By transitioning to 100% renewable energy in the town, Yackandandah will be a net zero community, which are big steps towards reducing carbon emissions across Australia.

Main Goal	Policy | **Technology**
	Community | Region | National

RES	COM	TRA

LGA Indicators

- Much easier to carry out in smaller areas, but has core ideas that could be implemented in residential areas
- Areas with a much higher percentage of volunteers can help band a community together and form change.
- Sense of community and cooperation is need in order for ideas to become a reality.
- Far off of the grid, has more incentive to use microgrid as they may have network or other issues