**What Is The Tiny Home Ecological Sustainability Village Model?**

This is a new idea in that it combines the idea of a tiny home village with the well established model of ecologically sustainable villages.

There are numerous companies that build tiny homes, and Multnomah County has purchased several over the years to house the unhoused. Before the homelessness crisis there were already two tiny home villages and they were working towards sustainability with solar panels.

The eco village model has existed in Europe for decades and even in the developing world they have popularity. The idea is simple, run a village on renewable energy like solar and have the village meet all its needs for food, waste collection and disposal, etc.

The tiny home ecological sustainability village model is a perfect model for Multnomah County and it can also be a testing ground to prove the model for how it could be adopted for larger neighborhoods.

What can work on a small scale can then be scaled up for larger populations, and this is especially true regarding biomass energy–something that has not been implemented in existing tiny home villages.

Companies like Home Biogas and a few others sell equipment to convert waste food into methane gas which is then used to produce electricity.

There are many supermarkets, the Oregon Food Bank and its associated pantries like those run by Lift Up Portland, restaurants and residents who are separating their food waste from other rubbish all over Multnomah County.

These properties are producing far more biomass waste than any village would need to power their village with biogas. In fact, there is such a surplus of biomass waste the goal of the eco village is to produce more electricity than it needs and sell the surplus to PGE, like surplus solar energy is often sold to them.

What is first needed is the biogas equipment, which I'll assume would be purchased from Home Biogas or a similar company as any biogas company would greatly benefit its reputation by partnering in the effort to create more renewable energy while helping address the homelessness crisis.

Once that contract is secured, the location of the village or villages needs to be decided and that decision should be informed by proximity to supermarkets, pantries, etc.

Then transportation of the biomass needs to be afforded. At the founding of the village, the labor for this transport can be contracted with the managing non profit organization; but over time this labor can become one of the jobs performed by resident-workers.

The village has to be populated and then trained on how to use the biogas equipment. Again, this would be done at the beginning by the non profit; but once the villagers were properly trained only management roles would be retained by the non profit.

With a regular supply of biomass, its conversion to electricity and disposal of waste water, the village would certainly be producing more electricity than it needs for the modest tiny homes inside it.

Within a year, the expectation is the village would be producing more electricity than it is using and so begin to show signs of profitability.

It would also be expected to see improved health and mental health for residents who are housed and working to keep their tiny home.

Like other tiny home villages, the eco village would have already manufactured tiny homes. It would have common showers and restrooms. It would have a common dining area where food is also prepared. It would have a meeting place, covered from the elements.

Resident-workers would wake up, perform their shift duty, leave the village to address any health or mental health issues and eventually be able to look for other work that would pay a regular wage.

Being a resident-worker is a path to become a wage worker and get an apartment or other housing.

Resident-workers necessarily gain new skills and work experience to make them more attractive potential employees.

Regular and random UA testing would be done by village management who regularly check-in on village operations and concerns. This is a sober, eco village model.

After the first six months of operation and the biogas labor is well established, the village would diversify by building a recycling center.

Certain types of recycled materials could be brought to the village by neighbors who may want to save money and depending on demand for this another vehicle might be added to the community to pick up such material such as wood, scrap metal, etc.

A labor group within the village would sort this material and arrange for its sale to companies with a demand for it.

This labor is already being done by some non profit organizations like Trash For Peace, so partnership in this effort is probable as both supply and demand already exists for it.

By the end of the first year, with the biogas and recycling center well established, a community garden would be built within the village and a third labor group added to the village.

This smaller group would tend the garden and bring produce to a Farmer's Market where people could buy the organic produce and know they are helping end the homelessness crisis when doing so.

In the off season, this group would become the sustainability education group and offer tours of the village and education on sustainability–especially biogas energy production–to local schools.

From the very start of this project, partnership with local universities is mutually beneficial as those universities would have hands-on education by helping train the villagers on the production and use of renewable energy, recycling, urban gardening and sustainability education.

Such a partnership would also lower the cost of operations for the village and maintain a high standard for best practices.

This model accomplishes many things.

- Houses the unhoused.
- Provides new skills and work experience through employment.
- Benefits public schools and universities by increasing education.
- Produces more renewable energy for the power grid.
- Lowers costs for businesses and neighbors, regarding their waste management.
- Allows non profit organizations to better collaborate with each other, within the village.
- Improves neighborhood safety with sober living and job security for resident-workers.
- Gives the homeless population hope for how they can again be productive members of society.

By the end of the second year, an eco village would be seen as a community asset and so have the opposite reaction from neighborhoods who generally do not want safe rest villages near them. More eco villages would likely be the public demand.

No doubt there would be challenges, technical and logistical work to be done. It wouldn't be easy to build an eco village but it wouldn't be that difficult either.

Unlike the safe rest village model, the eco village offers something to its neighbors–renewable energy, recycling services, food, education and security.

When a resident-worker might relapse, fail a UA test and have to be expelled from the village, there would have to be due process for that. This means from the beginning lawyers need to be paid and consulted so that due process is well understood before need for it arises.

Engineers and companies like Home Biogas have to be involved to make sure the biogas is well maintained and safely processed. Safeguards have to be established for this.

Yet, these considerations aren't anything new and similar projects have been done many times and with success.

There is no great danger or toxic hazard with biogas such as exists for natural gas. All the labor required for this project is common and without significant difficulty to perform.

What is needed most of all is an able bodied workforce willing to work for their housing and utilities and the homeless population has a certain percentage of them who absolutely are able bodied, desperate to escape the violence and drug use they find on the streets and even in shelters.

The village would likely develop their own security staff to regularly check on the biogas equipment to make sure it is operating within specified norms. They would also be able to help resolve any conflicts within the village.

After two years, resident-workers would have the experience of sober group living and so return to a sense of normalcy being productive members of the community.

This is a two year vision with quarterly reviews and reporting to be made available to the public.

The model expects to become profitable, so the cost of building an eco village would eventually pay for itself.

This model is also a stimulus to the local economy for biogas energy as it would grow a skilled workforce in this sector and likely inspire for profit companies to integrate biogas energy into their own business models.

Waste Management, the company, is a great potential partner in this effort as they already have a degree of biogas built into their business model.

In fact, an early partnership with Waste Management and/or Parks and Recreation, might further develop the biomass output by developing biochar.

Biochar involves taking yard debris, biomass gleaned from the parks, and producing electricity with it. There is no pollution of the air or water in this process and so this is a serious consideration for eco village development.

The eco village should be envisioned as a training village, a reintegration into society and a renewable energy village.

It renews hope among the hopeless, restores hope for the greater community regarding the homelessness crisis and by appealing to the common sense of the citizenry–a jobs program for the homeless.

It renews hope by developing renewable energy for the county and each eco village would be a model for the greater community to observe and learn from so an even more robust development of biomass energy might occur in Multnomah County.