

# Czech Renewable Energy Alliance

We consider the concept of Self-Powered Communities (SPC) based on locally available, affordable, and clean renewable energy sources to be the primary solution to dramatically improved quality of life anywhere in the world.

## Self Powered communities

### Proposed Strategy

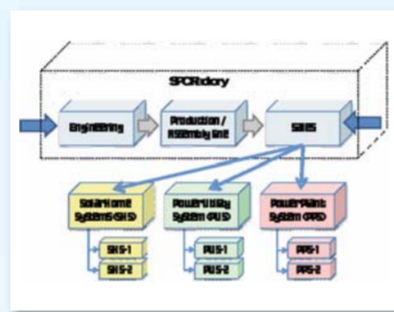
We propose the SPC concept to open an international dialog on how to improve quality of life for people living in rural and peri-urban areas in any less developed countries using this program of decentralized electrification based on RES. Analyzing present situation we have found the same case and effect; we found poverty and limits to add value, we saw poor families and entrepreneurs and we cannot see their internal motivation to improve it. Present situation is the same through world.

#### Propositions:

- To open a dialog concerning application of SPC methodology for specific needs of rural and peri-urban areas in Philippines.
- To participate in creation of an international team (Task Force) by providing development and assistance with benchmarking program of best practices gained from implementation of SPC projects in Africa and Asia.
- To take part in dissemination of lessons learned from projects using RES technologies in the ASEAN member states.

### Proposed Technology

Proposed technologies and/or other relevant technologies should be produced and supported by SPC Factory. SPC Factory leads to a development of domestic industry and to aggregation of the following functions: Engineering, Production/Assembly line and Sales (wholesale and retail system).



### Photovoltaic energy

A Thin-Film photovoltaic (PV) module manufacturing facility is proposed in cooperation with local business partners. The technology is based on silicon thin-film layers (amorphous and/or proto-crystalline). It is one of the most innovative technologies for production of economical effective and environmental friendly solar cells. More details and technical data concerning Thin-Film production line are available in the Letter of Intent issued by Consulting Business Group, Ltd. Prague, Czech Republic.

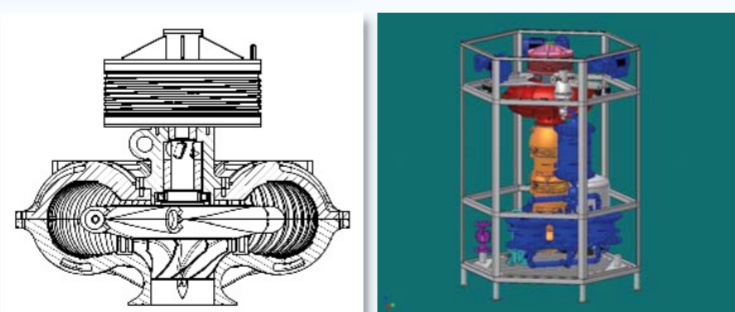


#### Propositions:

- Licensing PV production lines based on our proprietary technology to local manufacturing facilities
- Cooperation with local engineering companies active in construction of power plants
- Consulting and advisory services concerning our technology
- Training local engineers and semi-skilled labor force

### Thermal Turbines

Thermal Turbines (TT) convert accumulated heat (reaching 90°C) into electric power. TT can generate electric power or be used for heating or cooling of buildings. Development and implementation of TT technology is based on over 50 years of tradition in development, manufacturing, and operation of thermal turbines in power generation industry in the Czech Republic.



More details and technical data concerning Thermal Turbine units are available in the Letter of Intent issued by CENTIPEDE, a.s. Prague, Czech Republic.

#### Propositions:

- Thermal Turbine technology demonstration in the Czech Republic
- Assistance and cooperation with local engineering companies in Philippines which are involved in building some types of RES power plants (e.g. geothermal)
- Consulting and advisory services concerning our technology
- Training of local engineers and operation personnel

### Waste Management & Pyrolysis systems

Pyrolysis system (PYS) performs conversion of the communal waste (e.g. plastics, used tires, garbage), biomass waste (e.g. from harvest of rice, sugar cane) and biomass (e.g. fast growing grass, timber). PYS units convert the load of waste using gasification with absence of oxygen into electric power.



More details and technical data concerning Pyrolysis (PYS) units are available in the Letter of Intent issued by Arrow Line, a.s. Prague, Czech Republic.

#### Propositions:

- Demonstration of our Pyrolysis system and its operation in the Czech Republic
- Investments into renewable energy sources – namely in Pyrolysis technology – fit the specific needs of Philippines
- Import and installation of Pyrolysis System in cooperation with local partners
- Sharing of know-how with local partners in planning, installation, and operational stages of waste management

### Hydro energy systems

Hydraulic Micro Turbine (HMT) is a compact electric power generating unit with asynchronous three phase alternator driven by mini water turbine. It is identified and designed as a source of electric energy for small farm, small village, group of houses, etc. Tradition of hydro energy systems in Czech Republic was founded by inventions and work of Prof. Viktor Kaplan more than 100 years ago.

More details and technical data concerning Hydro Energy System are available in the CREA presentation.

#### Propositions:

- Technology manufactured under European Standards in Czech Republic
- Assistance and cooperation with local hydro engineering companies in The Philippines
- Economical and technical consulting and advisory services
- Training of local engineers and operation personnel

### Mixed technologies - examples

Our proposal is to build SPC projects based on the above-mentioned technologies while inviting other suppliers of already proven technologies (such as wind or wave energy), universities, research institutions, and manufactures who are working on development of the new RES technologies.

