

Translation of a letter to
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Energy community – SBRS concept

Presentation of an important alternative concerning bioenergy, which is the sun's radiant energy converted and stored during photosynthesis in plants. Hope that the sustainable conversion method of bioenergy in local high-tech biogas plants will soon be adopted to radically reduce the emissions and costs of today's unsustainable methods.

In the proposal known as the SBRS concept, **bioenergy is utilized in the form of**
1) **biomethane** in the biogas for trigeneration – converted into electricity, heat, and cooling
2) **organic carbon structures in biofertilizers** which are important carbon storage and at the same time energy source for soil organisms that help plant roots to absorb most of the elements that make up the plant and then all other organisms including humans.

The SBRS concept stands for "Sustainable Biological Recycling System". Food waste and toilet waste without dilution with water is mixed with plant waste and goes to a local high-tech biogas plant. Gray wastewater is treated locally with a biological method to be used locally for irrigation and water play.

We who present the SBRS concept have grown old and suffered from illnesses. Therefore, we want to pass the baton to younger people who can further develop various parts and influence development in Sweden, the EU and throughout the world.

On www.biotransform.eu there is some material that shows the need for a holistic view to cope with energy, health, economic and climate challenges.

<https://biotransform.eu/wp-content/uploads/2022/08/From-Photosynthesis-to-Photosynthesis-SBRS-concept-RS-BS.pdf>

<https://biotransform.eu/wp-content/uploads/2023/03/The-SBRS-concept-is-presented-by-BAS-konsult-AB-according-to-the-NABC-model-20230314.pdf>

<https://biotransform.eu/wp-content/uploads/2023/03/The-SBRS-concept-is-presented-by-BAS-konsult-AB-according-to-the-NABC-model-supplement-20230314-1.pdf>

<https://biotransform.eu/wp-content/uploads/2022/05/THE-TOILET-OF-THE-FUTURE-CC-BAS-BS-RS-1.pdf>

Background to the SBRS concept.

For humans, bioenergy is the most important energy that is taken in with food, along with all the elements that the body is made of. They are the same at least 16 elements that must be present in the soil for photosynthesis to work: H, C, O, N, K, Ca, Mg, P, S, Cl, Fe, B, Mn, Zn, Cu and Mo. In addition to that, the soil contains several stimulating elements such as Co, Cr, Ni, V, Sn, Li, F, Se, Si... and elements that affects plant health and quality of food and feed.

With today's handling of bioenergy and elements in organic material in residual products and waste approx. 98% of these elements pollute the air and water and everything around us. The people pay with fees to the waste companies and with healthcare costs.

Farmers are forced to use artificial fertilizers as communities send plant nutrients into the air, water, and landfills. Below are two examples of costly and polluting handling of nitrogen and phosphorus. The use of both elements has already exceeded the limits of the planet and threatens human survival.

1) **In 2022, a sewage treatment plant in Sweden has received**

a) **1,855 tons of nitrogen (N)** of which 27% was released with "purified" water into waterways, 21% remained in the sludge and 52% was sent to air, some percent became nitrous oxide (N₂O).

b) **217 tons of phosphorus (P)**, of which 7% was released with "purified" water into waterways, 83% remained in the sludge and 10% is not accounted for. Incineration of sludge is planned, which is already underway to recover phosphorus. In that case, no nitrogen is returned to cultivated land while emissions and soil degradation continue.

2) **A cogeneration plant in Sweden uses 310,000 tons of biofuel per year.** To be able to estimate the emissions, pine pellets with a 9% water content are used. This means that fuels used in reality may contain more or less nitrogen and phosphorus. Emissions per year:

a) about **564 tons of nitrogen (N)** to the air forms nitrogen oxides (NO and NO₂), NO is a greenhouse gas

b) approx. **9.9 tons of phosphorus (P)** remain in the fly ash and bottom ash. Fly ash is sent for disposal to Langöya in Norway, bottom ash is used as reinforcement material for landfill cover.

During the last 40 years, the excess water method in most biogas plants has been similar to the one that began to be used around 100 years ago. Who can answer the following questions:

Why is the focus still on thermal conversion methods (combustion, thermal gasification, and pyrolysis) which kill all living things present in organic material i.e. decimating biodiversity?

Why are emissions from the management of waste and sewage that threaten the environment and health not reported?

Why does the Environmental Code in Sweden allow thermal conversion methods?

Why is there still a lack of further development of biogas plants for the sustainable production of biomethane in the biogas and of biofertilizers that will phase out artificial chemicals?

Who is slowing down the transition to a knowledge-based sustainable society?