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PREPARATORY ACTION ON  
**Smart Rural Areas**  
in the 21st Century



# Stanz Token

*Examining opportunities to combine a digital local currency with a renewable energy community in Stanz im Mürztal.*

Final Version

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‘Stanz Token’: Examining opportunities to combine a digital local currency with a renewable energy community in Stanz im Mürztal

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With the DLC, traders also want to pay municipal taxes, suppliers from the Stanz and obtain electricity from the Energy Community. Nevertheless, it is important for them that the DLC can be made exchangeable in Euro.

Discount promotions for payment with the DLC can be used to incentivize customers at tradespeople to circulate the DLC.

- *Very high acceptance among participating tradespeople*
- *Increase in local added value*
- *Digital supplement to the analog DLC*
- *DLC should be exchangeable in Euro*
- *Payment of suppliers / purchase of electricity from energy community*
- *Need to establish in accounting systems*
- *Payment of municipal taxes*
- *Discount promotions for payment via DLC in stores / service companies*

### **5.3. Open Space Conference**

The aim of the conference was to exchange and discuss previous results from the field research and participation as well as with regard to the token design at expert level. In addition, further relevant aspects were developed with individual stakeholders and results were questioned and validated. The conference was held as an expert workshop on 6th May and as an open space event on 7th May. The open space started with a welcome by Mayor Fritz Pichler, followed by a Keynote entitled "Digital Local Currencies for Energy Communities. Potentials, Challenges and Current Examples" by Prof. Alfred Taudes. He covered topics ranging from energy communities to local currencies to blockchain with individual case studies. As conclusion, he stated in the keynote:

- RECs provide an important contribution to the energy transition
- Numerous advantages offered by RECs
- Decentralized billing infrastructure creates flexibility.
- Flexible infrastructure for expansion of an REC into innovative areas of activity
- RECs form the basis for local currency to strengthen the regional economy

The keynote and a Q&A session were followed by discussions at two work tables. Moderated by Alfred Taudes and Vinzenz Treytl (ABC Research), the relevance of a DLC and the goals and intentions of a REC were elaborated with the participants in the two groups. The main focus was on legal issues, potential ways of implementation and possible synergies as well as the added value that is created for individuals and the community..



Figure 3: Open Space Conference, Stanz im Mürztal, Presentation Alfred Taudes



Figure 4: Open Space Conference, Stanz im Mürztal, World-Café, Topic development

The following topics, questions and aspects were identified as relevant for the project:

### **Technical and legal issues**

- Define the goal of the REC and the introduction of a local currency in Stanz.
- Well-founded planning and design in the context of the REC Stanzertal: Bring together all data that are available to create a basis for a participatory decision-making (value and money flows among each other).
- Remain flexible in the concept: Do the REC and DLC topics have to be linked or can the two topics be thought of in separate ways? (digital counterpart to the Stanz voucher).
- It is to be considered: The value of money is not determined by the quantity, but by the speed of circulation.
- Regulatory sandbox as a useful way to try things out before going into the final phase<sup>85, 86</sup>.
- There is an appropriate moment to involve the Austrian Financial Market Authority (FMA): This should not be too early, as the concept may not be mature enough at that time. But also not too late, otherwise the FMA may feel bypassed.
- Stanz could be a possible sandbox: a provisional license is granted and the concept can be tried out and experience gained without taking legal risks. These experiences are then also interesting for other regulatory authorities.

### **Social / Social Innovation.**

- Involve as many people as possible in the discussion and development process.
- We need the entire Stanz population or REC on board for the local currency. Create a common understanding. Continue the participation and negotiation processes on the municipal level.
- There will always be groups in a community that are "against". How do you engage them? Communication is necessary: inclusion and integration.
- The suffering is increasing in the current crises. Offers can be made here to address this. The benefits for the people and the community must be clearly identified and communicated.
- Potential target group: young people as digital natives. We need influencers: they can communicate benefits and show use-cases.
- It is easy to try out incentives for climate-friendly action with the technical tools (note: a wallet): Start actions without much effort and stop them if they don't work.

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<sup>85</sup> A "regulatory sandbox" refers to a regulatory framework in which companies can develop and test new business models in close cooperation with the regulator. This relatively new instrument is commonly used to foster innovation in highly regulated sectors such as financial services. (see: FMA (2022))

<sup>86</sup>see: BBVA (2018)



developed on the basis of other research on the topic. This includes the following levels, which build on each other and go from low to high involvement<sup>87</sup>:

- Inform: creation of understanding and know-how
- Consult: gain feedback and get input from the stakeholders contacted
- Include: working directly with stakeholders throughout a process
- Collaborate: stakeholders are integrated in different aspect of decision making

Among others, the following interventions are recommended for the individual phases<sup>88</sup>:

Inform:

- Flyers / Postcards
- Newsletter
- Promotional Video
- Media Campaign
- Collective efficacy information
- Communication for trust
- Energy Feedback

Consult:

- Semi-Structured interviews Surveys
- Information sessions
- Site visits

Include:

- Consensus Workshop
- Engagement-Event / Drop-in- event
- Focus Groups

Collaborate:

- Community Mapping
- Town Meetings
- Workgroups / Forum

In retrospect, many of these proposed interventions were implemented in the research and participation process in this project. It has already been mentioned in this report that over the last few years, trust has been built up within the population regarding the path of

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<sup>87</sup> cf. Bielig et.al. (2022) p. 21 - 23

<sup>88</sup> cf. Bielig et.al. (2022) p. 25f

development in Stanz. Since the introduction of new technologies with the system of a DLC is a highly innovative project with an experimental character, it is necessary to avoid failure, as this can otherwise be accompanied by a loss of trust. Bielig 2022 et. al. go into principles of communication for trust and refer to the integrity, benevolence and competence model by Mayer, Davis, & Schoorman. The authors characterize this as follows: „Competence refers to the ability to realize promises, based on adequate knowledge, expertise, skills, leadership, and other characteristics in related domains. Benevolence implies having a sincere concern for customers’ interests and the motivation to do good for them, while integrity means the adherence to a set of sound principles. Each of these components helps to increase a trustworthy perception of an organization or person. When the three factors are met, a high level of trustworthiness is perceived“<sup>89</sup>. And provide an overview of recommendations regarding communication for trust:



Figure 6: Recommendation overview - communication for trust concepts<sup>90</sup>

<sup>89</sup> see: Bielig et.al. (2022 p. 30)

<sup>90</sup> Bielig et.al. (2022 S. 31) - own revision

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## Open Space Conference

### Conference on 06.05.2022

As already mentioned, the knowledge transfer with experts on the topic of energy community took place on May 6th from 10 am. The Institute for Sustainable Technologies (Stanz+, FFG), ABC, SCAN, Caliberco and the Energy Agency Styria were present. This online conference was moderated by Rainer Rosegger. Furthermore, it was held and recorded via the platform Zoom.

After a round of introductions and the presentation of the three guiding themes, which were based on projects from the recent past for the Stanz region, the presentations started immediately.

First, Martina Majcen from AAE Intec (Institute for Sustainable Technologies) moderated the knowledge transfer from the Stanz+ and the FFG project in Stanz, which has been running since 2019. The overall goal in this project is to create the municipality of Stanz im Mürztal with its weak infrastructure into a best practice municipality for Austria in terms of an innovative PlusEnergyQuarter. From the original project "City of the Future" the goals were formulated, which are now to be implemented in the FFG Stanz+ project. The focus is on optimizing and expanding energy networks, increasing the use of renewable energy sources, and revitalizing the town center in Stanz im Mürztal. Among other things, the expansion of PV plants, the expansion of wind power plants as well as the creation of a Rural Pioneers community and cooperative business models will be promoted. The foundation of the Energy Community Stanzertal plays an essential role.

With inventory analyses of the energy networks, building surveys and inspections of the Upper Stanz, an energy balance sheet was created and potentials for the region were identified. In addition, surveys were conducted with building owners on the condition of the houses and, in particular, to raise awareness among the population. With the renovation of the community center and the establishment of a local supplier, essential points in the project could already be ticked off.

Furthermore, the losses in the heating network were determined and initial efforts to create a buffer for district heating were conceptualized. An application for the reconstruction of the hydroelectric power plant has been submitted. The expansion of wind power is under negotiation as of May 2022.

With the integration of hydropower and wind power and the construction of PV plants and potential storage facilities for electricity surpluses, the municipality of Stanz im Mürztal can thus become a multiplier for energy communities in Austria.

The creation of new business models for energy production and energy distribution in structurally weak communities will also be decisive for this.

After the exciting presentation about the technical background of the project in terms of the energy community, Caliberco with Mirella Bärnthaler and Lisa Schatz (agency SCAN) presented the project status in 2Villages 21.

Based on the renewable energy community "Stanzertal", a local currency can be created in close connection with energy production. The rural community can create new opportunities for the energy community and thus new value flows based on energy for the region. After a short presentation of the project and the goal, the status quo (May 2022) within the Stanz Tokens project was presented. Further on, international best practice examples were discussed, the results of the participation process were explained and the functionality of the E-Token was explained.

After a round of questions, especially related to the Stanz Token and its incentivization, Johannes Kohlmaier from Energie Agentur Steiermark presented the platform "Energiegemeinschaft". The platform "Energy Community" serves as an interface for energy communities from all over Austria, which supports and accompanies the foundation of energy communities and provides interested persons with information. By creating a solid base of experience, people who want to establish an energy community in Austria can find step-by-step instructions on the platform. There is also the possibility to take advantage of training offers. Within the platform, the Stanzertal energy community also acts as a pilot community. Here, too, the status quo and the current challenges were presented in terms of the Energy Community Stanzertal and the energy communities throughout Austria.

### **Conference on 07.05.2022**

As mentioned in the methodology, the conference took place on Saturday, May 7 in the on-site community hall.

The participants consisted of experts from the Vienna University of Economics and Business, ABC, Caliberco, SCAN and stakeholders from Stanz and participants from the energy community.

The conference started at 10 a.m. under the moderation of Rainer Rosegger with the presentation of the project to become a pilot community for Austria and the EU. After that, the mayor welcomed the 24 participants of the conference. He then presented the superstructure of the project and the central questions of today's conference, which were as follows:

- How can we, as a structurally weak municipality, counteract current events?

- How can we counteract distortions?
- How can we target which resources?
- How can we become autonomous as a small community?

After the introductory words of the mayor Fritz Pichlers, the chairman of the energy community Sven Aberle put all participants concerning the events on the newest conditions (May 2022):

- With the local electricity company there is at present a good agreement in the sense of the energy community.
- Feedback from outside: In the meantime, everyone knows the Stanz with its project. This is observed with a lot of positive encouragement
- We are taking a pioneering role and have a lot of support from outside.

Bernd Vötsch, who was present on behalf of the province of Styria and the "LA21" process, then welcomed the participants. The LA21 process was instrumental in creating the framework for the current Smart Rural project.

The meeting continued with the presentation of the current project status and the introduction of Caliberco and ABC, which was followed by the presentation of Professor Alfred Taudes from the Vienna University of Economics and Business (and co-founder of ABC Research) about Blockchain technologies in connection with energy communities.

Professor Alfred Taudes presented the benefits and purposes of a renewable energy community and showed the potential advantages based on pilot projects in Austria, such as Schnifis, Vorarlberg or urban pioneers, Vienna. He then presented models of decentralized electricity billing and infrastructure solutions in terms of the energy community. Some of the benefits may be that there can be a community-based billing system, immutability and thus anti-counterfeiting, and flexibility in areas of use. For example, prosumers can generate their tokens by generating surplus power into their wallets tokens and use and exchange them in the locality in many ways. The benefits of local currencies in terms of promoting and stabilizing the local economy were also presented.

Following the presentation, there was an open Q&A session with the previous presenters, which can be divided into two topics as follows:

#### **- Energy and Volunteerism**

Volunteerism and energy are central roles in the project. There should be the possibility to remunerate unrewarded care work in order to ensure stability and willingness to volunteer in the community. Thus, "fame and honor" can be recognized by receiving tokens.

### **- Accounting systems and local currency**

Within the accounting systems one must pay close attention to the reactions of the population. Learning by doing applies. Therefore, there is also a high demand for flexibility. Currently, only a quarter of the value creation remains in Stanz. In order to maintain the infrastructure, it is important that more people shop in the village. In addition, it is necessary to talk to business operators whether they accept the token as a means of payment.

The local currency is not a blockchain but a decentralized money system and thus functions anonymously.

Whether or not the currency should expire is up to the community to decide and is a question of system design

After the Q&A session, there was a historical presentation on the pioneering days of electricity generation in Stanz by historian Anna-Maria Kohlhofer, who based on the founding of the Stanzertal Energy Community, took up and presented the history of electrification.

After a 45-minute break, the event continued with two discussion tables on the topics of the energy community and local currencies in a world cafe format. These were moderated by Professor Alfred Taudes and Vinzenz Treytl (both ABC) and lasted 1.5 hours.

This was followed by the presentation of results by the members of the conference and the moderators respectively. The results are summarized on page 45 of the report.