Successful implementation of the SUCELLOG concept based on corn cobs in Austria

The mobilisation of
agricultural solid biomass for local energy
Brussels, 15th February 2017

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Landwirtschaftskammer Steiermark

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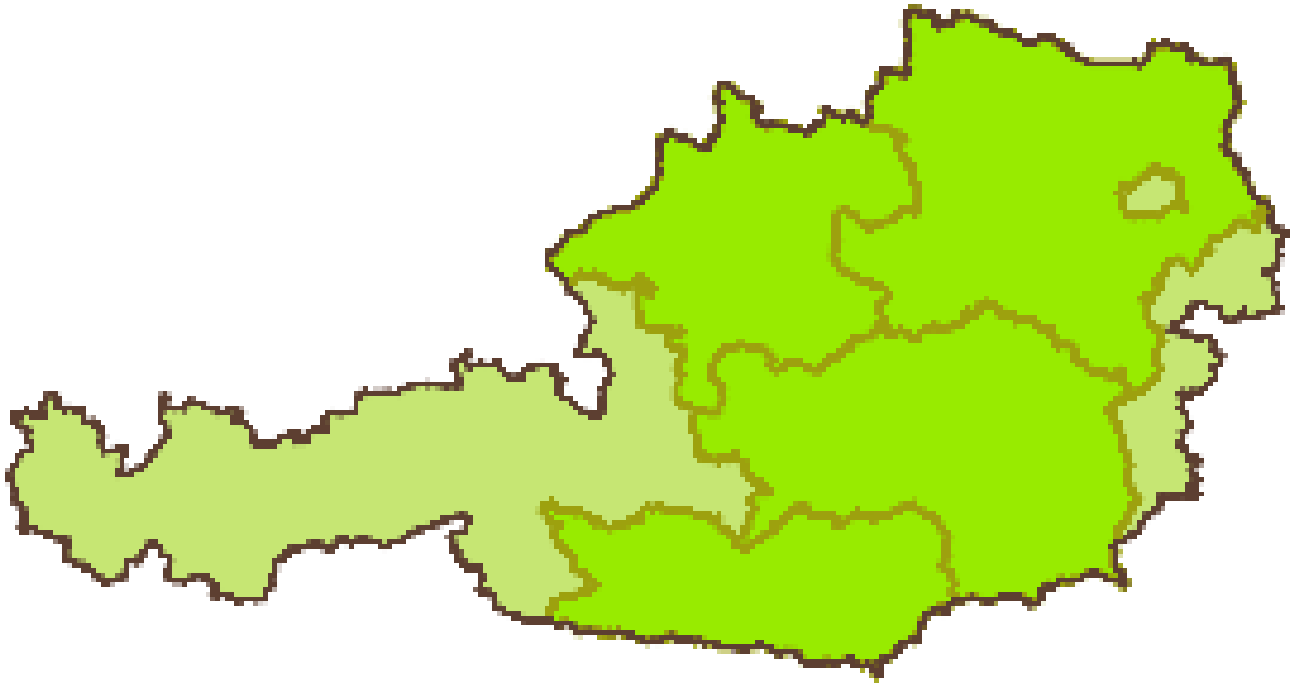
Project area in Austria



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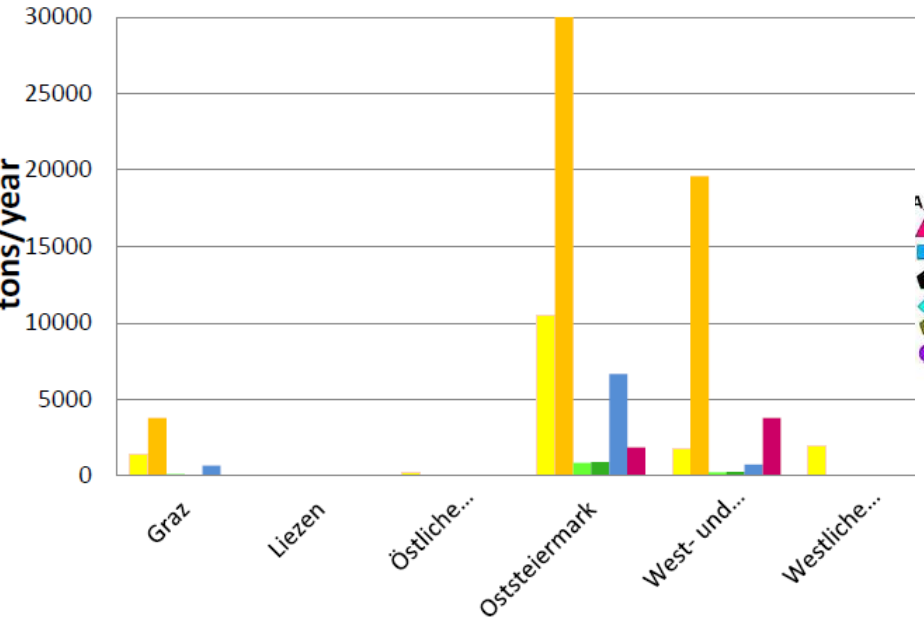
Residues in Styria



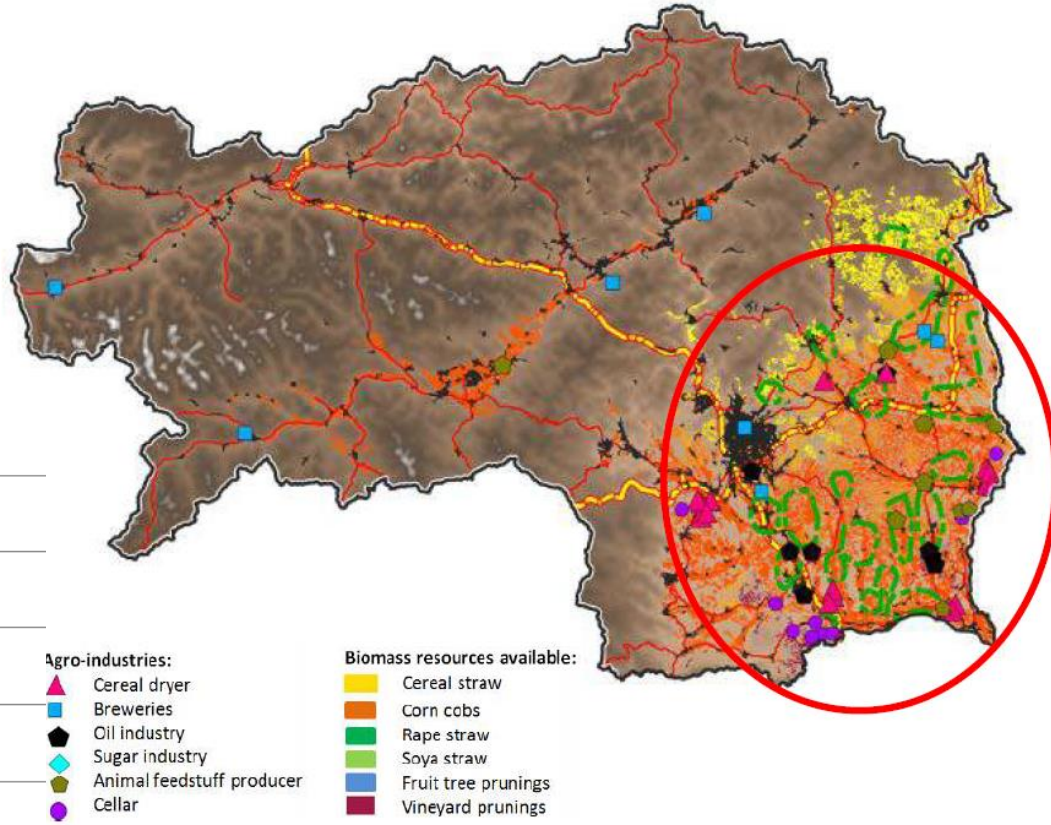


Figure 6: Localization and type of agro-industries and resources in Styria.

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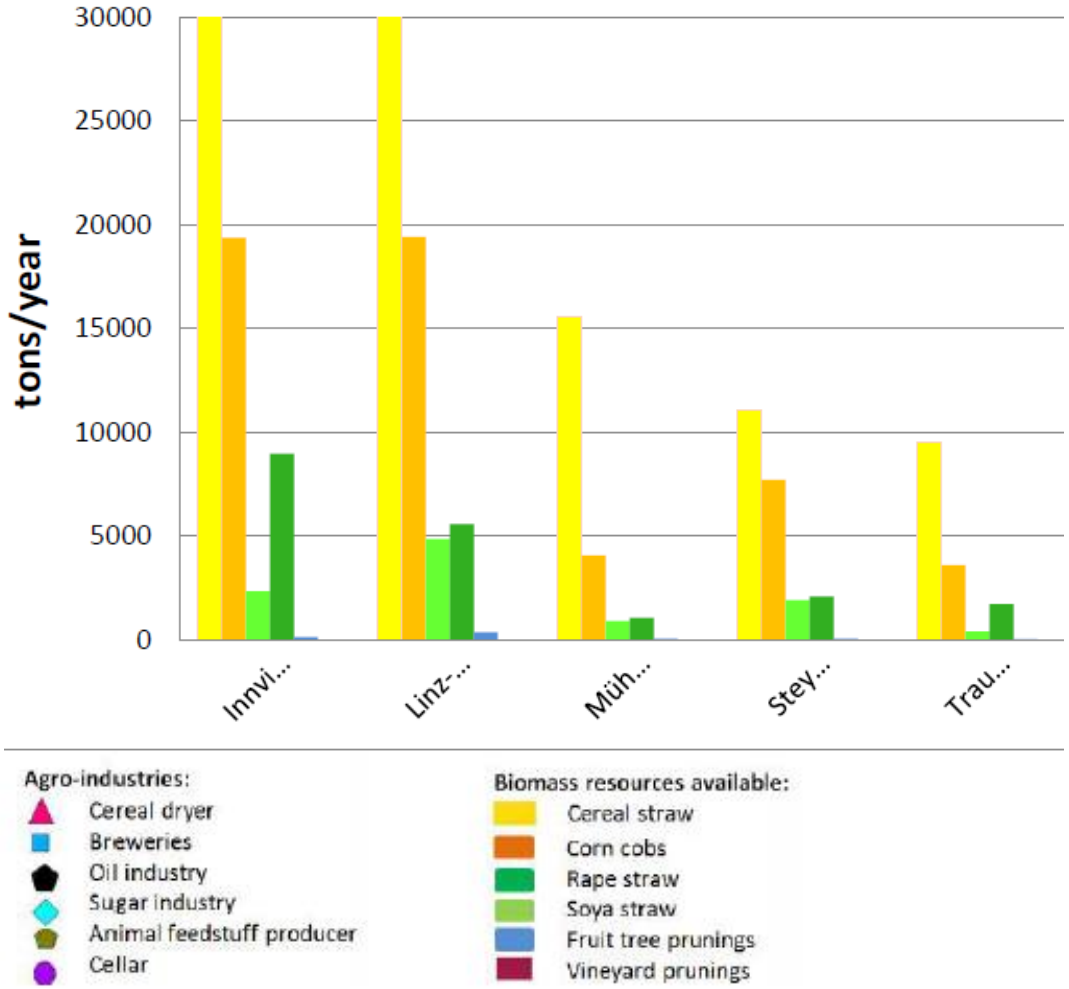
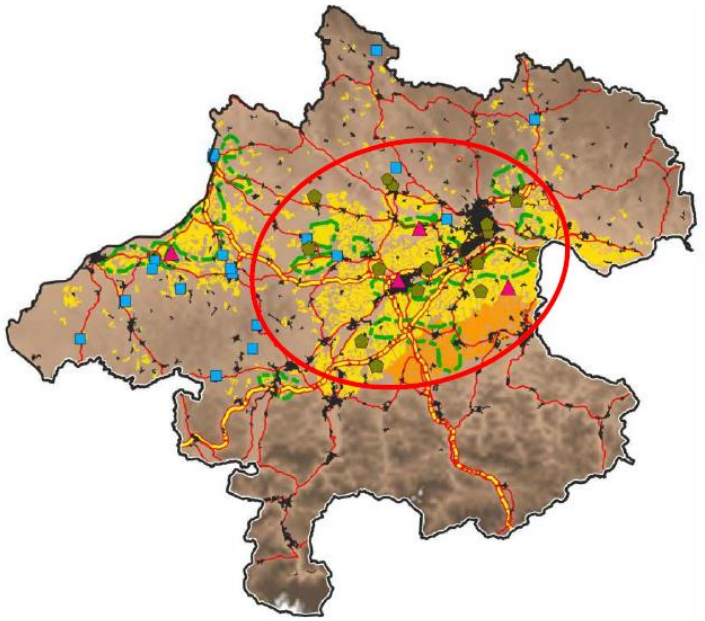
Residues in Upper Austria





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Corn cobs

- no competitive use
- decent properties

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Achievements in Austria

20 agro-industries diagnosed

8 agro-industries supported (7 feasibility studies)

308 participants in workshops

56 stakeholders engaged in local meetings

17 meetings with policy makers

197 contacts with stakeholders during the project

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Projects impact

SUCELLOG impact : In AUSTRIA, SUCELLOG has triggered the mobilisation of around 2 ktoe of resources for energy production and an expected investment of more than 0.5 M€ in a short-term

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Tschiggerl Agrar GmbH

- **Region: Styria**
- **Main activities before Sucellog:**
  - Corn harvesting and drying
  - Logistic operator of straw
- **Just 2-3 months of operation/year**

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Tschiggerl Agrar GmbH

- **patented harvesting machine**
  - adaption costs: ~€ 30.000,-

AVAILABLE RESOURCES (30 km radius)
3280 t/yr wheat straw
1910 t/yr barley straw
15249 t/yr maize cobs
200 t/yr poor quality hay

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Tschiggerl Agrar GmbH

- **use of corn cobs to dry corn**
- **yearly savings:**
  - 250 000 litres heating oil
  - 780 tons of CO2
- **pay back time:**
  - 2 years

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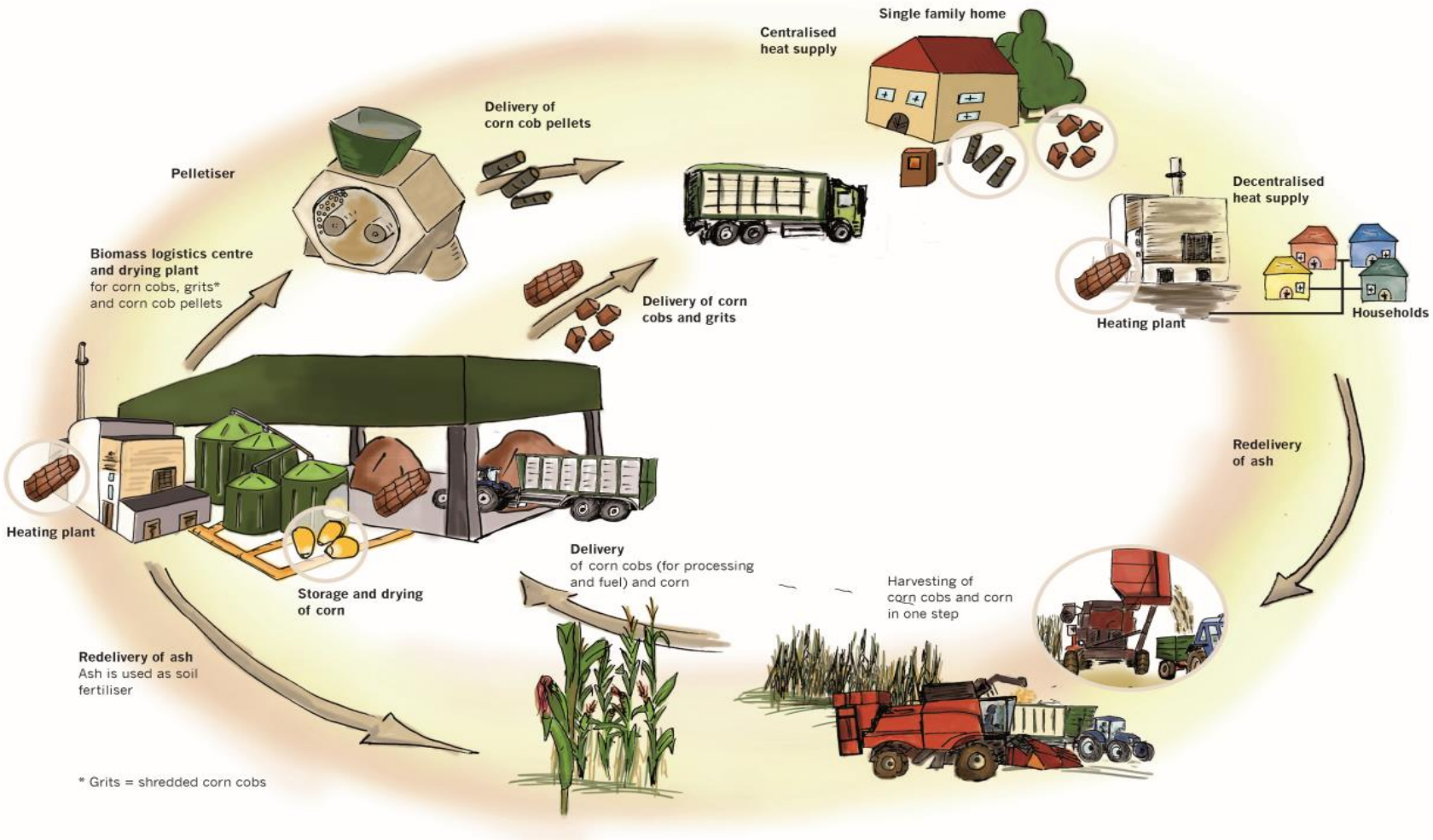
Tschiggerl Agrar GmbH



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Tschiggerl Agrar GmbH

- Already in operation
- cooperation in pelletising
- 2016: 1700 t raw material mobilised
- 3 types of fuels
- self-consumption
- partnership with 2 ESCOs

Einmalig: Logistikzentrum für agrarische Biomasse

Eine Gruppe südoststeirischer Bauern eröffnet das weltweit erste Biomasselogistikzentrum für agrarische Reststoffe in Halbenrain. Ab sofort werden bis dato ungenutzte agrarische Reststoffe zu wertvollen Energieträgern veredelt.

Pelletierstraße samt Maisspindel-Trocknungsanlage

In dieses einzigartige Logistikzentrum bringen Bauern ihre bisher ungenutzten Reststoffe wie Maisspindeln, Landschaftspflege- und Naturschutz-Heu, Stroh, erwähnten ungenutzten agrarischen Reststoffe zu Brennstoffen, Futtermitteln, Tiereinstreu und Spezialdünger pelletiert werden; und aus einer Trocknungsanlage, die mit dem Reststoff Maisspindeln befeuert wird.

In der Trocknungsanlage werden beispielsweise Kürbiskerne, Mais, Sojabohnen und Getreide getrocknet. Damit wird ihre Lagerfähigkeit erhöht und die Qualität bleibt erhalten. Die Trocknungskapazität liegt bei 14.000 t Tonnen. So werden jährlich 250.000 Liter Heizöl und 779.662 Kilogramm klimaschäd-

Eröffneten das neue Logistikzentrum in Halbenrain (v. li.): Christian Metschina, Günter Weiß, Alfred Kindler und Franz Tschiggerl.

mit Obmann Günter Weiß sowie Franz Tschiggerl, der mit dem Unternehmen Tschiggerl Agrar GmbH die Trocknungsan-

unterstützte das Projekt von der Ideenfindung über die Projektierung bis hin zur Realisierung. Nähere Informationen zum The-

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Alwera AG

- **Region: Styria**
- **Main activities before Sucellog:**
  - contract crop growing
  - harvesting, drying, commercialising
- **Just 2-3 months of operation/year**

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Alwera AG

- **dry corn cobs available through regular activity**
- **tests on self-consumption**
  - cobs where too dry (slugging, maintenance)
- **thinking of producing grits**
  - too small market
- **swapping dry against wet cobs with Tschiggerl**
- **self-consumption: 550 tons wet cobs / year**
- **Fuel cost savings: ~ 35 000 € / year**

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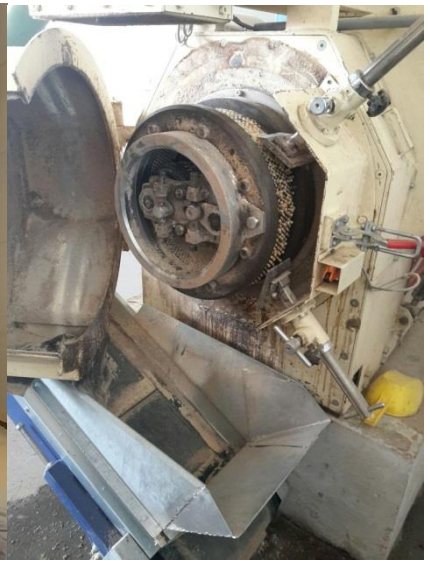
BIOS 1

- **Region: Lower Austria**
- **Main activities before Sucellog:**
  - cereal drying and
  - wood chips drying
  - with heat from biogas plant



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BIOS 1

- **plenty of electriticy and heat available**
- **raw materials:**
  - overlaid maize silage
  - corn cob
- **agro-fuels:**
  - pellets
  - grits
- **2 ESCOs are willing to consume**

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Non-technical barriers in Austria

1. **Lack of political commitment**
2. **Lack of information at biomass users**
3. **Large excess of wood biomass in the market**
4. **Difficulties in securing signed commitments**
5. **Low oil and gas prices**
6. **Lack of appropriate technologies at a reasonable price**

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Technical barriers in Austria

- **Main technical barrier:**

„very little appropriate and approved technology is available on the market“

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Contribution of SUCELLOG to LK

1. **Understand the energetic context in Austria**
2. **Interact with policy makers**
3. **Provide a valuable service for our members/customers**
4. **Promote a new kind of sustainable energy**
5. **Become a reference on agriculture biomass in Austria**

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Summary

1 sucessful example:

promotes new initiatives

triggers technological innovation

creates awareness for policy makers

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Thank you for your attention !!

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