Interreg
CENTRAL EUROPE
European Union
European Regional
Development Fund

STORE4HUC

DOCUMENTATION ON THEMATIC REGIONAL / INTERNATIONAL SEMINARS/CONFERENCES ON ENERGY STORAGES

D.C.6.2 Version 1

The transnational report Date

Title	Documentation on thematic regional / international seminars/conferences on energy storages
Deliverable	D.C.6.2
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Status	
Reviewed by	
Submission	

Content

1. Summary

Germany:

The seminar on energy storages in historic buildings was embedded in the Climate Alliance digital days on the 7th of October 2020. It was marketed as a seminar, for which one could register on the climate alliance homepage. The seminar took place in form of a zoom meeting, in which three keynote speakers presented their individual project or solution. The meeting was moderated by climate alliance members.

The first speaker was Paul Fay, energy manager of the city of Frankfurt, he reported on the "Masterplan 100% Climate Protection "which aims to halve the Cities' Energy consumption by 2050. The Presenter emphasized a three-part solution for either system. Short-term day/night storage, a compensation system absorbing energy peaks and a long-term storage either battery/hydrogen based or a seasonal storage regarding heat.

Followed by Andrea Dornhofer, the representative for the "Innovationszentrum W.E.I.Z.", she spoke about the "W.E.I.Z." project, which was implemented in the Austrian city Weiz. Heat production via biomass was already implemented there and supplied the historical church and the parish building, as well as a hotel and residential buildings. To further push energy efficiency, the local partnership of WEIZ realized a project in June 2020 to install a heat storage unit within the framework of the Store4HUC project, which improves the energy consumption and reduces CO2 emissions through improved utilization. She presented Data which showed a theoretical reduction of CO2 emissions by 32,77 tons per year.

Mr. Hofstetter presented the newly developed "Autarky Rate Tool" which is part of three different rating tools all designed for different users. The "Autarky Rate Tool" is specifically meant for those with little to no prior knowledge. Its intention is to start the interest of a broad audience to use energy storage ad to calculate the best dimensions of the storage and get them started to evaluate a possible investment. Being a Web-application, it accomplishes the goal of easy accessibility and has a simple overlay. Users can switch between solar-, wind- or hydroelectric Power, different storage units and enter basic information to calculate profitability and the name-giving autarky rate. That number indicates how independent a energy system is on the gird. Economically it is best if a private or municipal system is as independent as possible. In the end a link was given to test the "Autarky Rate Tool" first hand.

Following each presentation there was an opportunity for audience members to ask questions and have a discussion about the presented content.

Austria:

The regional seminar on energy storages took place in Weiz together with the official opening event of the Weizberg pilot. About 60 people (stakeholder, the public audience, technical experts, etc.) have attended at the event on the 23rd of July 2021. Besides the pilot visit and the introduction of the storage, the three Store4HUC tools (Autarky Rate Tool, Optimal Sizing Calculator, Heat heat source scheduler) were presented to the participants.

Slovenia:

In the framework of Store4HUC Slovenian partners organized and carried out the workshop/training on tools for stakeholders and practitioners. The main aim of the training was to present the functionalities of the tools. The tools that have been presented are the Autarky rate tool and EMS tools (Module 1: Optimal sizing calculator and Module 2: Optimal heat source scheduler).

The workshop was organized along with the thematic seminar in relation to another deliverable D.C.6.2. With this we increase the audience and make easier promotion of the project on one side and the tool on another side.

Project partners made the training more attractive by involvement of participants during presentations with interactive questions. This provided higher commitment and understanding of the tool. Furthermore, the workshop was organized in the practical manner as well, such as testing the tool by participants themselves. This was truly beneficial; as personal experience has a major role on the decision whether to use the tool in the future or not. Various institutions took part such as: municipalities, agencies, private company, experts and practitioners.

After the meetings, there were long and fruitful discussions with very interesting ideas. It was especially valuable that the participants learned from each other. A general response was that such events are useful and should be repeated. Also, the participants reported their interest in tool usage and possible Letter of intent signing.

Italy:

Environment Park presented the Interreg Central Europe STORE4HUC project on October 21st at the forestry school of Ormea (Cuneo) during a regional event, co-organized with the partners of Interreg Alcotra Pays Ecogetiques project. The event focused on three sessions:

- the first session dedicated to energy production and environmental management as examples of success and prospects for development
- the second session dedicated to forest management and biofuel production: certification to protect quality and sustainability
- the third session dedicated to the theme of energy efficiency and energy diagnosis of buildings

In this last session, the contribution of the Environmental Park was inserted, presenting the main results of the STORE4HUC project.

Croatia:

The thematic regional seminar was held under the PLC professional workshop organized by EESTEC LC Zagreb, a non-profit student association that promotes self-improvement of their members and offers multicultural exchanges and workshops. The workshop included also a competition on PLC programming, so it gathered motivated students with knowledge in automation systems. The seminar on usage of energy storages was focussed on students who participated on this workshop and the PLC programming competition -- future experts in control and energy systems. The workshop was supported by several companies dealing with automation systems in Croatia, and thus also a representative of a company dealing with automation systems was present.

2. Date and place

2.1. Germany;

Date: 7th of October 2020

Place: The Seminar was embedded in the digital days of Climate Alliance in form of a zoom meeting. Participants could register on the Climate Alliance Website, to get the Zoom link needed to join the meeting.

2.2. Slovenia;

Date: 14th of June 2021

Place: online through Zoom

2.3. Austria;

Date: 23rd of July 2021

Place: Weizberg, 8160 Weiz

2.4. Italy;

Date: 21st of October 2021

Place: forestry school of Ormea (CN)

2.5. Croatia;

Date: 14th of October 2021

Place: University of Zagreb of Electrical Engineering and Computing

3. Number and types of participants/target groups

3.1. Germany;

A total of 21 audience members were participating in the Zoom meeting. A broad mixture of municipal stakeholders, staff of partner municipalities to climate alliance and staff members from different working fields were attending. The event was addressed to municipalities, energy manager and individuals interested in setting up a project or buying energy storage.

The Seminar was especially targeting local authorities as well as those in charge of energy issues in municipal communities.

Examples for municipal representatives:

- City of Hannover
- City of Hanau
- City of Tübingen
- City of Milan
- City of Modena

Furthermore, there where participants from other Stakeholders like:

EcoFellows Academy

Sustainable Research Institute, University of East London

3.2. Slovenia;

23 attendees participated at the event (seminar and workshop). There was variety of organisations which are:

- Municipality;
- Higher research and education;
- Agencies (development and energy);
- Service providers;
- Policy organisation;

3.3. Austria;

About 60 participants have been counted but only 34 of them have signed the signature list

Company	Local public authority	Regional public authority	Sectoral agency	Infrastructure/Service Provider	Interesting group incl. NGO´s	Higher education and research	Business support organisation
Gasthof Ederer			X				
Biomasseheizwerk Weizberg				X			
Biomassehiezwerk Weizberg				X			
W.E.I.Z.	X						
Maschinenring							X
Raiba				x			X
Pfarre Weiz				x	X		
Biomasse district heating Weiz				X			
Energy Grid operator Styria				X			
Wood company Hochegger			X				
AEE INTEC						X	
Biomasseheizwerk Weizberg				X			
Biomasseheizwerk Weizberg				X			
Biomasseheizwerk Weizberg				X			
Studien Technologiezentrum						X	
Agriculture company Hofer				X			
Siemens Energy			X				
City of Weiz	X						
City of Gleisdorf/ Federation of Austria	x	X					
TB Haas			X				
Holz Steinbauer			X				
Holz Steinbauer			x				
Woche Weiz				X			
Weitzer Parkett			X				
Kleine Zeitung				X			
Energy operator Styria				X			

Biomasseheizwerk Weizberg				x			
Lieb Bau Weiz			x				
Privat							
4ward Energy Research GmbH						X	
4ward Energy Research GmbH						x	
Pfarre Weiz				x	x		
Biomasse Weizberg				x			
Gemeinde Thannhausen	x						

3.4. Italy;

Environment Park was represented by Mauro Cornaglia and Luca Galeasso, who organized and attended the event.

The event was attended by many local administrators and representatives of major regional and provincial institutions as well as professionals involved in the forest-energy chain and energy efficiency of buildings. The event was also attended by some students of professional schools and technical institutes of the Province of Cuneo and the forestry science course of the University of Turin.

3.5. Croatia;

The target group were 30 motivated students gathered around a competition in automation systems design, and that is why this seminar was organized by UNIZG-FER as a side event in the course of this competition

4. Topics tackled and links to deliverables, outputs

4.1. Germany;

Topics were the potential of energy storages in the climate protection plan of the city of Frankfurt and discussing the possible usage as a component to reach 100% renewable energy and to fulfil the cities plan to reach 95% CO2 emission reduction. The plan is based equally on the reduction of energy consumption and on the exclusive use of renewable energies and residual heat. Furthermore, it highly depends on an Energy storage system for both Electricity and Heat.

The second presentation tackled the practical implementation of a heat storage unit in a building ensemble under monumental protection laws. Even though these are strict and often do not leave much room to plan in, the Project was successfully been planned and installed in the Store4HUC project.

Finally, the “Autarky Rate Tool” was introduced to the audience members for the first time. Its characteristics and the data base were explained as was the usage of the tool. It

aims specifically on those thinking about investing in a storage solution. (D. T3.2.1 - D. T3.2.4)

4.2. Slovenia;

The project partners shared their knowledge about the tools with the different target groups. The training consisted mainly of the theoretical part and the practical one. There were also additional topics that were discussed with the audience such as: what are the background information and data, how the tools were developed, etc. The practical part was attractive since the participants could get acquainted and involved by testing the tools themselves.

The trainings were mostly attended by energy experts. There was a lack of municipality officials, unfortunately.

4.3. Austria;

The opening of the Storage took place on the 23rd of July on the top of Weizberg, with about 60 participants. Andrea Dornhofer from the Weiz presented the Store4HUC project, the Austrian pilot and the Store4HUC-Tools, the Autarky Rate Tool, the Optimal Sizing Calculator and the Optimal Heat Source Scheduler. The participants were very interested in the project, especially in the calculation tools.

The event was linked to the deliverables D.T3.3.3 Workshop with partners and members of the deployment desks, D.T3.3.4 Acceptance of the tools and D.T1.1.4 3rd Deployment Desk meeting.

Moreover, the event was linked to D C.1.1 Common communication strategy. The project rollup was used (D.C 3.2) and the promotion material like the Cotton Bags (D.C 3.1), the solar power banks (D.C 3.3) and the project leaflets (D.C 2.1) have been distributed.

4.4. Italy;

During the seminar the main regional initiatives in support of interventions of energy efficiency of public assets, the methodologies for carrying out energy audits and evaluation of the sustainability of interventions and some best practices were discussed and presented. Regarding the results of the STORE4HUC project, the tools developed for the promotion of renewable energy storage systems (Autarky Rate Tool and Module 1-2 of the EMS) and the pilot cases realized in the project were presented.

The main results reported in WP2 and WP3 the project were presented.

4.5. Croatia;

Findings on the Store4HUC project how the storage systems can be used efficiently in interaction with energy sources within buildings and infrastructure was provided to the students. The usage of tools developed in the project was explained to them and also the background of these tools which relies on materials of different courses they learn in the course of their study. In particular, the lecture was divided into three parts, first part concerned the Store4HUC Optimal Sizing Calculator tool, i.e. how can the photovoltaic and battery storage system be optimally sized for a site. The second part related to the

Store4HUC Heat Source Scheduler tool which was also explained to them and then examples of its usage were shown, especially it was emphasized how one can benefit from predictive planning versus using classical automation solutions. The third part of the seminar related to the concrete Store4HUC pilot site in Lendava for which it was explained how the heating system there is modelled.

5. Expected effects and follow up

5.1. Germany;

One of the biggest issues in switching over to renewable energies is the generation of heat and the Storage of it. With the Seminar provided by Climate Alliance participants could get a closer look how municipalities and other actors take action. With the first presentation the audience was informed how local authorities issued an ambitious plan to achieve CO_2 neutrality by 2050. A crucial part is the storage of heat, which was outlined by the presentation from the city of Frankfurt. Other local municipalities can use the strategy outlined by the City to start projects and to start the planning to reach similar goals in their municipalities. Especially with such a difficult topic like heat storage, stakeholders were given an easy explanation on how to create a three step storage plan. Including short-, medium- and long-term storage concepts.

The presentation on the deployment of a heat storage unit in Weiz demonstrated the feasibility of municipal projects to improve the energy consumption of historic buildings. It showed that even with the strict rules of monument protection it is still possible to implement the heat storage. It can serve as an example for other communities which are too pessimistic to implement similar projects and help them overcome problems with the monumental protection.

The “Autarky Rate Tool” provides the audience with a powerful instrument to distribute among their municipality or stakeholders. From the individual up to professional use the tool can be used to evaluate possible investments in a storage unit.

5.2. Slovenia;

The participants of the trainings were very satisfied with the content. They welcome the new topics. Although the number of the municipalities attended was not satisfied the impact of the training was high. In general, the scientific backgrounds information and data were presented what makes the training more convincing and motivating. The effect of the training was measured by oral feedback of the participants during the event. The responses were positive in terms of support for further tool usage. Additionally, the practical training is also more useful and it gives the participants much more useful information and impact.

5.3. Austria;

The monitoring of the storage and the biomass plant as well as the presentation of the Store4HUC-Tools and the official opening of the storage were on the agenda of this meeting.

Only the implementation of the fully integrated, intelligent load management of all system components in interaction with the central heat storage tank and the decentralised

heat storage tanks at the customers premises makes it possible to minimise the disadvantageous operation mode of the boiler plant and prevents the local heating network from being used as a thermal buffer. These measurements thus increase the flexibility and energy efficiency of the entire biomass heating plant. Essentially a lot of positive effects are achieved.

Moreover, the three calculation tools, the Autarky Rate Tool, the Optimal Sizing Calculator and the Optimal Heat Source Scheduler have been presented to the participants and very positive feedback was collected. Especially the Optimal Heat Source Scheduler was very interesting for the participants as it is related to the local pilot plant. In this way the tools could be disseminated to a wider audience and some of the participants have shown a strong interest in signing the letter of acceptance (D.T 3.3.4).

5.4. Italy;

Both the pilot cases and the tools presented met the interest of the audience, who were invited to use the tools developed. Feedback about the use of the tools is expected and their use will be disseminated. It was also useful to discuss the economic and regulatory barriers that still hinder the spread of storage systems and renewable energy plants in our country and in particular within the historic urban centres with representatives of the institutions.

5.5. Croatia;

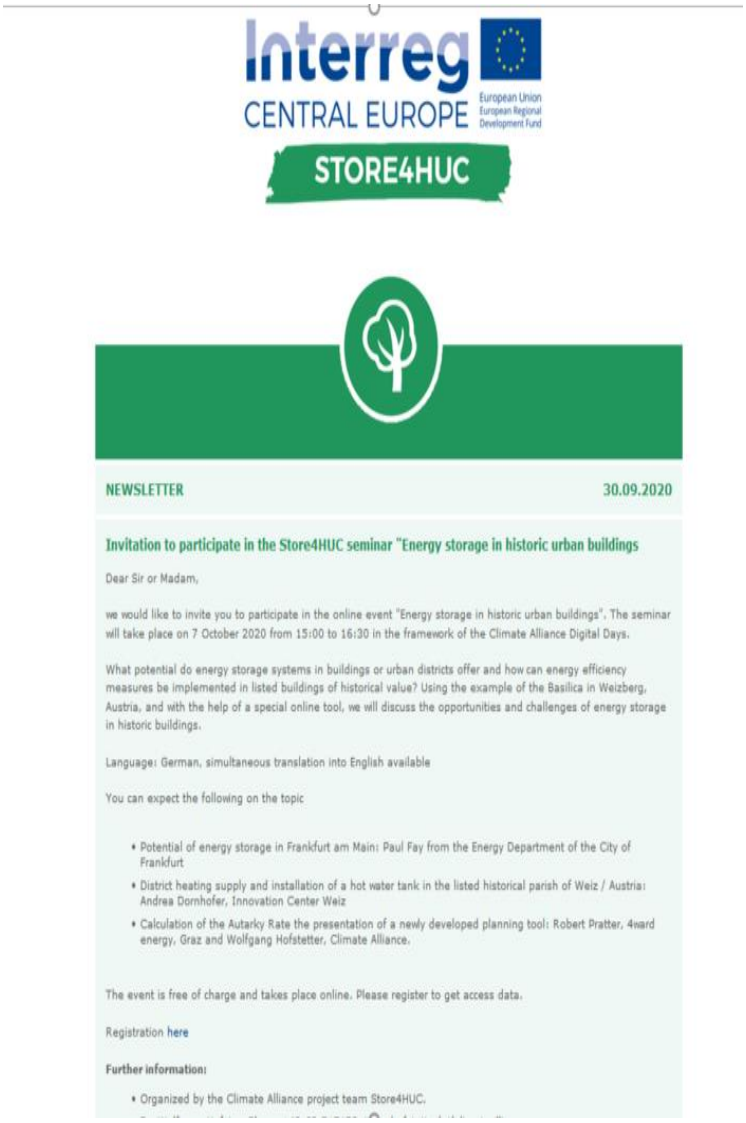
The effect of the seminar is to increase the knowledge and awareness of future control and energy system experts about the possibilities of using and controlling energy storage in energy systems with a high share of renewable energy sources. Especially interesting to students was employment of mixed-integer programming to describe the phenomena with phase-change materials in the storage in a numerically efficient way. It was also interesting to them how careful planning of heat sources operation relied on control engineering and mathematics can alleviate the need for using fossil fuels in assuring good comfort conditions in a building.

Possible follow-up could be that students work on different variations of problems addressed by the presented tools on the seminar within their mentored courses in the remainder of their study (seminars, projects, theses) and thus further progress the area of energy storages parametrization and use.

6. Annexes

6.1. Invitation and Agenda

6.1.1. Germany;



NEWSLETTER 30.09.2020

Invitation to participate in the Store4HUC seminar "Energy storage in historic urban buildings

Dear Sir or Madam,

we would like to invite you to participate in the online event "Energy storage in historic urban buildings". The seminar will take place on 7 October 2020 from 15:00 to 16:30 in the framework of the Climate Alliance Digital Days.

What potential do energy storage systems in buildings or urban districts offer and how can energy efficiency measures be implemented in listed buildings of historical value? Using the example of the Basilica in Weizberg, Austria, and with the help of a special online tool, we will discuss the opportunities and challenges of energy storage in historic buildings.

Language: German, simultaneous translation into English available

You can expect the following on the topic

- Potential of energy storage in Frankfurt am Main: Paul Fay from the Energy Department of the City of Frankfurt
- District heating supply and installation of a hot water tank in the listed historical parish of Weiz / Austria: Andrea Dornhofer, Innovation Center Weiz
- Calculation of the Autarky Rate the presentation of a newly developed planning tool: Robert Pratter, 4ward energy, Graz and Wolfgang Hofstetter, Climate Alliance.

The event is free of charge and takes place online. Please register to get access data.

Registration here

Further information:

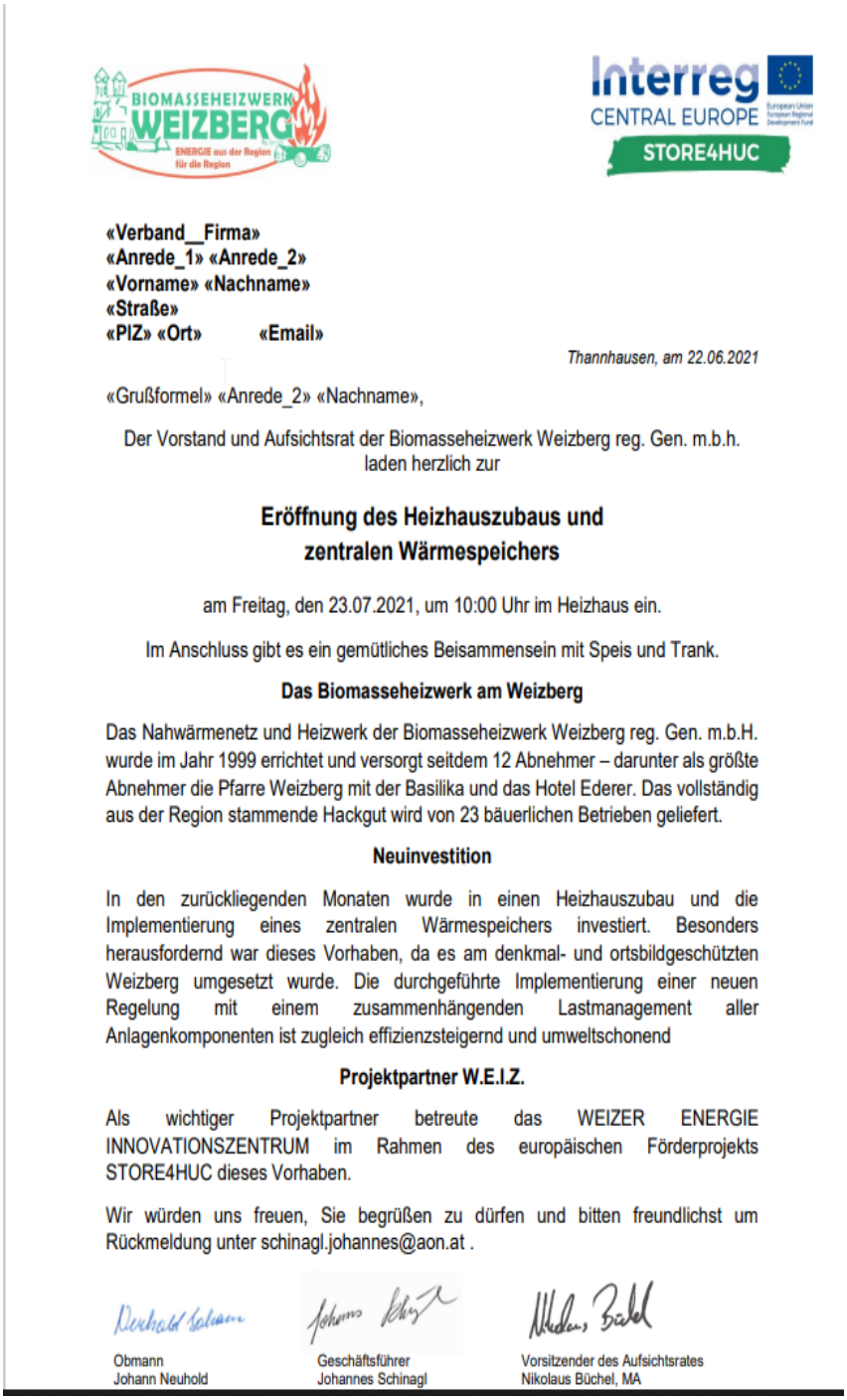
- Organized by the Climate Alliance project team Store4HUC.

6.1.2. Slovenia;

Lokacija: online - ZOOM: https://zoom.us/j/95178243340

14. junij 2021: 10:00 - 15:00	
10:00 - 10:05	**Prihod in zbiranje**
10:05	**Pozdravni nagovor** *Jasmin Kukec, direktor Razvojne agencije Sinergija* **Uvod v seminar in delavnico** *Katja Karba, strokovna sodelavka Razvojne agencije Sinergije*
10:45	**Hranilniki energije - zelena prihodnost Pomurja?** *Bojan Vogrinčič, Lokalna energetska agencija za Pomurje*
11:15	**Možne rešitve hranilnikov energije** *Dušan Prejac, IVON, inštalacije ogrevalnih naprav*
11:45	**Predstavitev hranilnika toplote lendavske knjižnice in ostalih projektnih pilotov** *Štefan Žohar, Razvojna agencija Sinergija*
12:15	**Kosilo**
13:15	**Autarky rate orodje** *Štefan Žohar, Razvojna agencija Sinergija*
13:45	**Kalkulator optimalne velikosti (Optimal sizing calculator)** *Štefan Žohar, Razvojna agencija Sinergija*
14:15	**Načrtovalnik optimalnega vira toplote (Optimal heat source scheduler)** *Štefan Žohar, Razvojna agencija Sinergija*
14:45	**Vprašanja in odgovori**
15:00	**Zaključki seminarja in delavnice** *Katja Karba, Razvojna agencija Sinergija*
15:15	**Konec srečanja**

6.1.3. Austria;



«Verband__Firma»
«Anrede_1» «Anrede_2»
«Vorname» «Nachname»
«Straße»
«PlZ» «Ort» «Email»

Thannhausen, am 22.06.2021

«Grußformel» «Anrede_2» «Nachname»,

Der Vorstand und Aufsichtsrat der Biomasseheizwerk Weizberg reg. Gen. m.b.h. laden herzlich zur

Eröffnung des Heizhauszubaus und zentralen Wärmespeichers

am Freitag, den 23.07.2021, um 10:00 Uhr im Heizhaus ein.

Im Anschluss gibt es ein gemütliches Beisammensein mit Speis und Trank.

Das Biomasseheizwerk am Weizberg

Das Nahwärmenetz und Heizwerk der Biomasseheizwerk Weizberg reg. Gen. m.b.H. wurde im Jahr 1999 errichtet und versorgt seitdem 12 Abnehmer – darunter als größte Abnehmer die Pfarre Weizberg mit der Basilika und das Hotel Ederer. Das vollständig aus der Region stammende Hackgut wird von 23 bäuerlichen Betrieben geliefert.

Neuinvestition

In den zurückliegenden Monaten wurde in einen Heizhauszubau und die Implementierung eines zentralen Wärmespeichers investiert. Besonders herausfordernd war dieses Vorhaben, da es am denkmal- und ortsbildgeschützten Weizberg umgesetzt wurde. Die durchgeführte Implementierung einer neuen Regelung mit einem zusammenhängenden Lastmanagement aller Anlagenkomponenten ist zugleich effizienzsteigernd und umweltschonend

Projektpartner W.E.I.Z.

Als wichtiger Projektpartner betreute das WEIZER ENERGIE INNOVATIONSZENTRUM im Rahmen des europäischen Förderprojekts STORE4HUC dieses Vorhaben.

Wir würden uns freuen, Sie begrüßen zu dürfen und bitten freundlichst um Rückmeldung unter schinagl.johannes@aon.at .

Obmann
Johann Neuhold

Geschäftsführer
Johannes Schinagl

Vorsitzender des Aufsichtsrates
Nikolaus Büchel, MA

6.1.4. Italy;

This is the agenda of the 3rd session, with the presentation of the Store4HUC project.

DIAGNOSI ENERGETICA e PERFORMANCE DEGLI EDIFICI

Ormea, Scuola forestale di Ormea, atrio di ingresso (via Angelo Silvio Novaro, 96) , 10.30 – 13.00

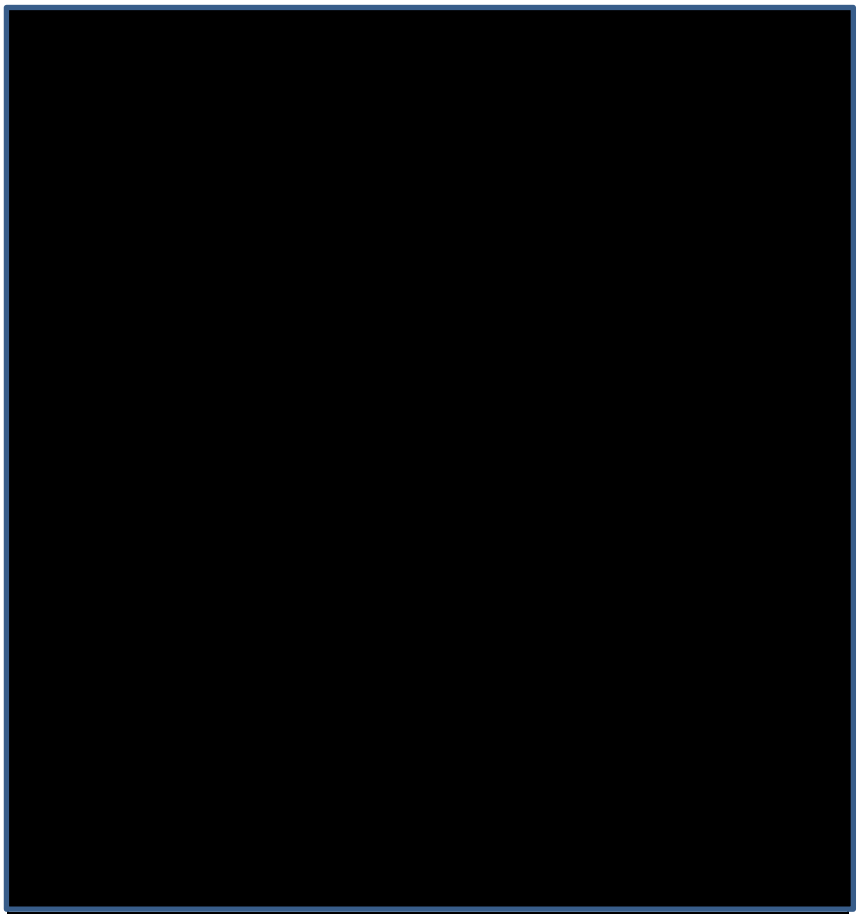
- Saluti della preside della Scuola Forestale di Ormea, dott.ssa Mara Ferrero
- Avvio degli interventi – Coordinamento a cura di Mirella Francolini (Provincia di Cuneo)
- Enrica Zanotti (Provincia di Cuneo) - Presentazione del progetto Pays-Ecogetiques
- Bianca Eula (Direzione regionale Ambiente Energia e Territorio - Settore Sviluppo Energetico Sostenibile) - Iniziative regionali a supporto degli interventi per l'efficientamento energetico del patrimonio edilizio degli Enti locali piemontesi.
- Claudio Capitanio e Andrea Moro (iiSBE Italia) - L'utilizzo della piattaforma FeliCity come strumento preliminare per la realizzazione di diagnosi energetiche e valutazione della sostenibilità degli interventi.
- Paolo Oliaro (Docente del Politecnico di Milano, Direttore tecnico della società Advanced Engineering di Milano) - Diagnosi energetica "cantiere aperto": illustrazione della metodologia
- Martino Roatta (Ordine degli Architetti P.P. e C. della Provincia di Cuneo, capofila del progetto Alcotra Habit.a, Abitare le Alpi del Sud nella prospettiva dei cambiamenti climatici)
- Mirella Francolini (Provincia di Cuneo) - L'Intervento di efficientamento energetico presso l'ITIS Cuneo
- Mauro Cornaglia (Environment Park) – Il progetto Store4HUC e gli strumenti sviluppati per la promozione dei sistemi di accumulo dell'energia rinnovabile

6.1.5. Croatia;

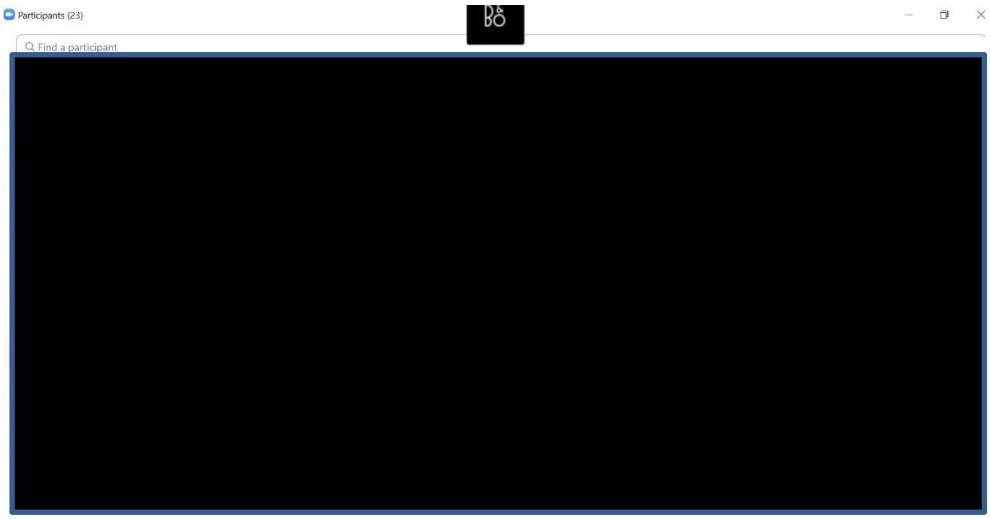
PLC RASPORED.pdf

6.2. List of participants

6.2.1. Germany;

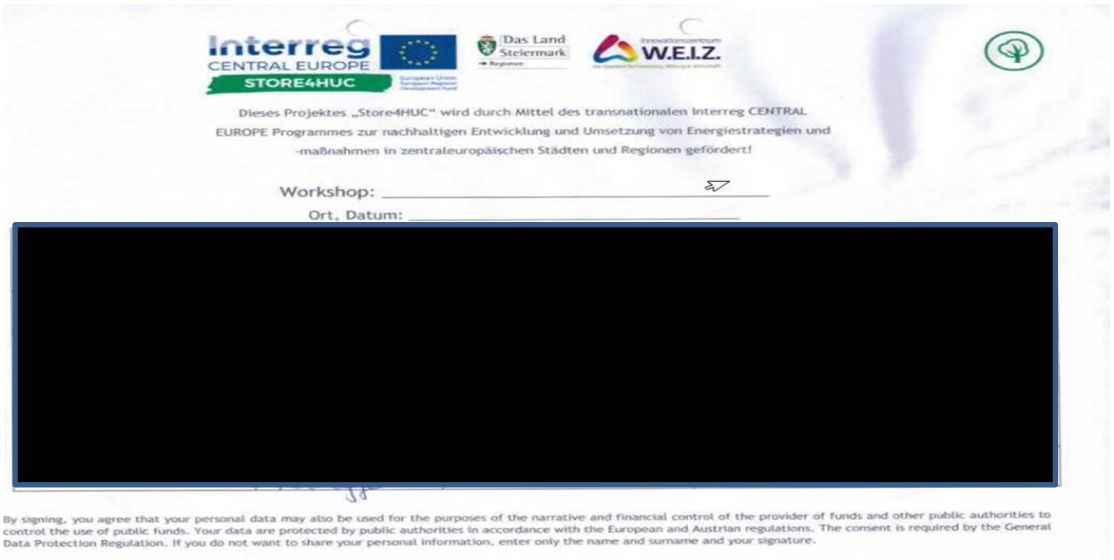


6.2.2. Slovenia;


Participants (23)
Find a participant

6.2.3. Austria;


Interreg
CENTRAL EUROPE
STORE4HUC
Das Land Steiermark
W.E.I.Z.
Dieses Projektes „Store4HUC" wird durch Mittel des transnationalen Interreg CENTRAL EUROPE Programmes zur nachhaltigen Entwicklung und Umsetzung von Energiestrategien und -maßnahmen in zentraleuropäischen Städten und Regionen gefördert!
Workshop:
Ort, Datum:
By signing, you agree that your personal data may also be used for the purposes of the narrative and financial control of the provider of funds and other public authorities to control the use of public funds. Your data are protected by public authorities in accordance with the European and Austrian regulations. The consent is required by the General Data Protection Regulation. If you do not want to share your personal information, enter only the name and surname and your signature.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Workshop: _____

Ort, Datum: _____

[redacted]

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Workshop: _____

Ort, Datum: _____

[redacted]

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Workshop: _____

Ort, Datum: _____

[redacted]

By signing, you agree that your personal data may also be used for the purposes of the narrative and financial control of the provider of funds and other public authorities t control the use of public funds. Your data are protected by public authorities in accordance with the European and Austrian regulations. The consent is required by the Gener Data Protection Regulation. If you do not want to share your personal information, enter only the name and surname and your signature.

Dieses Projektes „Store4HUC" wird durch Mittel des transnationalen Interreg CENTRAL EUROPE Programmes zur nachhaltigen Entwicklung und Umsetzung von Energiestrategien und -maßnahmen in zentraleuropäischen Städten und Regionen gefördert!

Workshop: _____

Ort, Datum: _____

[redacted]

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Ort, Datum: _____

[redacted]

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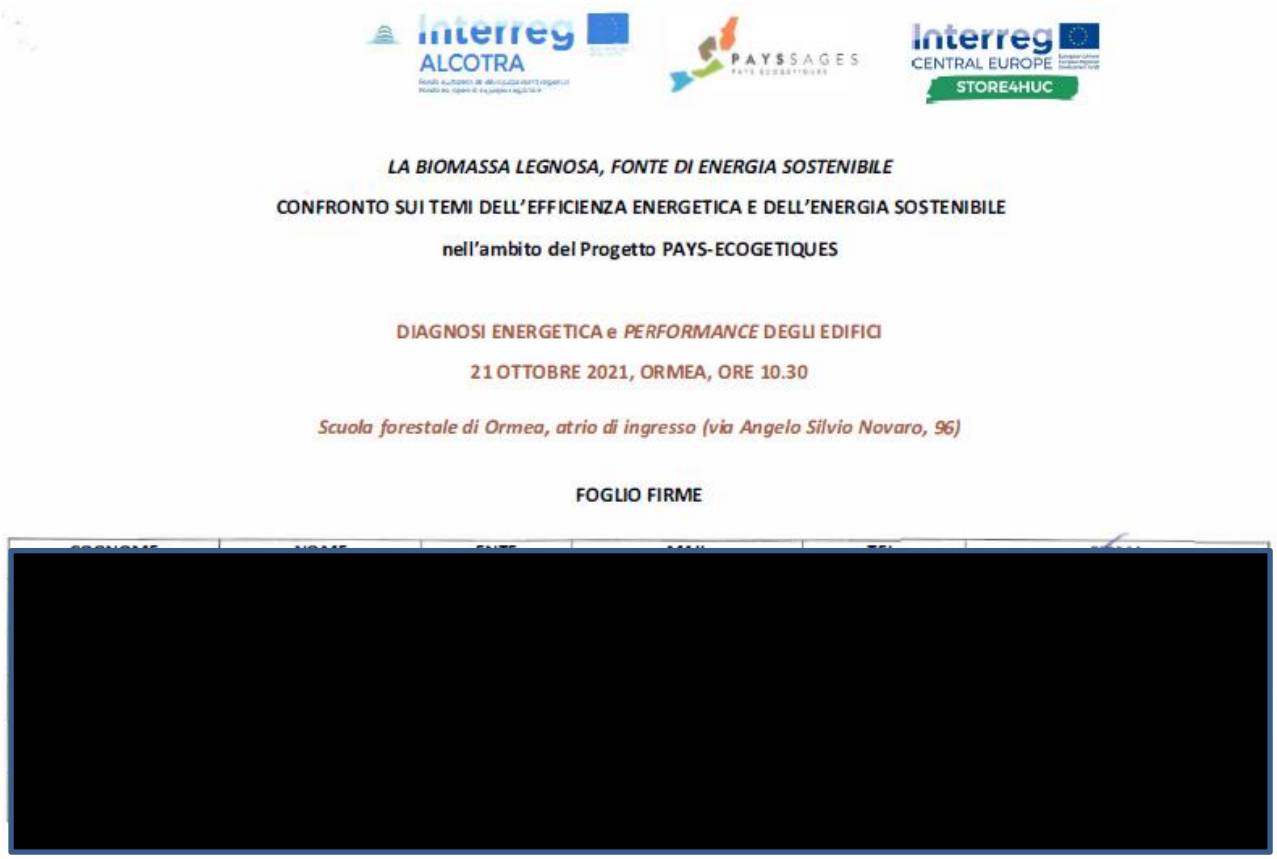
6.2.4. Italy;



LA BIOMASSA LEGNOSA, FONTE DI ENERGIA SOSTENIBILE

CONFRONTO SUI TEMI DELL'EFFICIENZA ENERGETICA E DELL'ENERGIA SOSTENIBILE

nell'ambito del Progetto PAYS-ECOGETIQUES

DIAGNOSI ENERGETICA e *PERFORMANCE* DEGLI EDIFICI

21 OTTOBRE 2021, ORMEA, ORE 10.30

Scuola forestale di Ormea, atrio di ingresso (via Angelo Silvio Novaro, 96)

FOGLIO FIRME

[redacted]

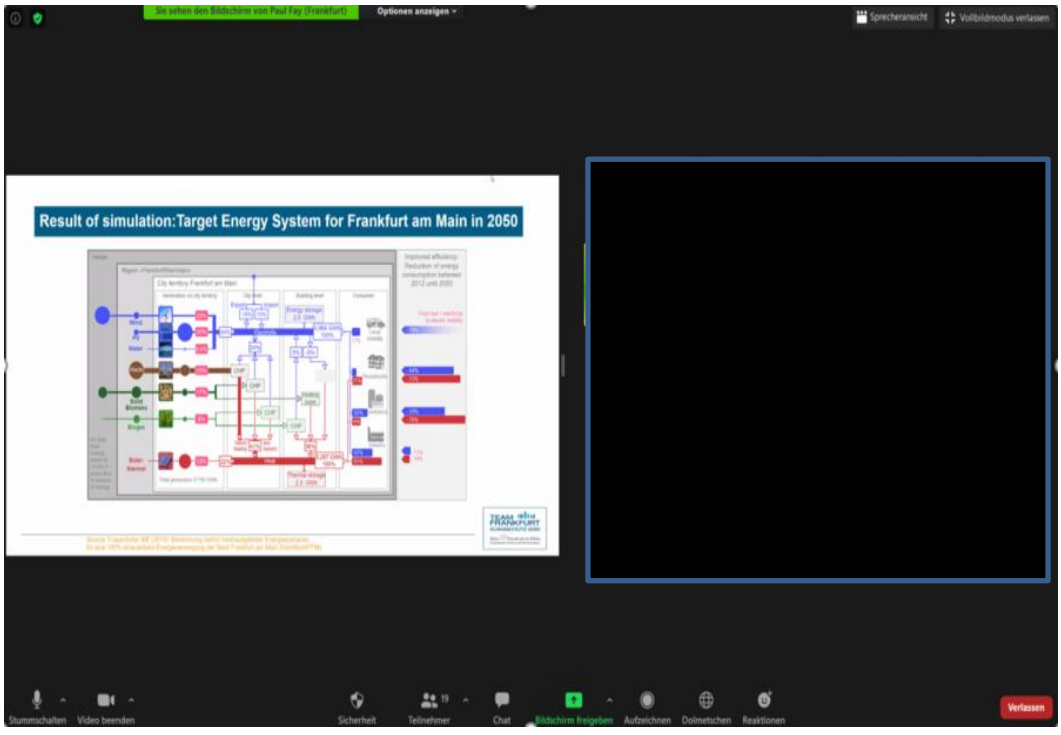
COGNOME	NOME	ENTE	MAIL	TEL.	FIRMA
[redacted]					

6.2.5. Croatia;

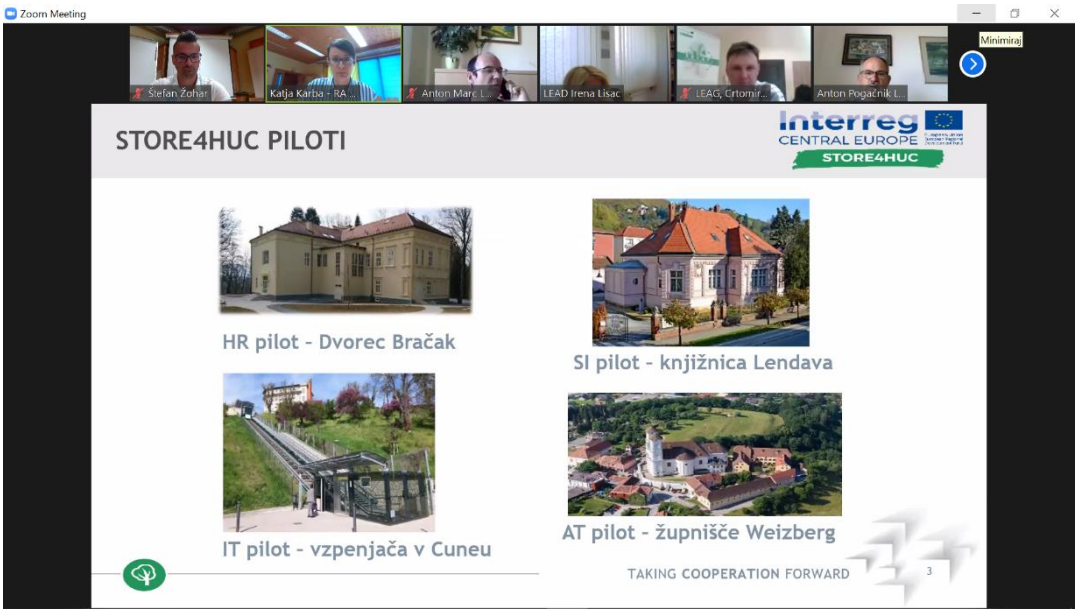
Prijave za PLC radionicu.pdf

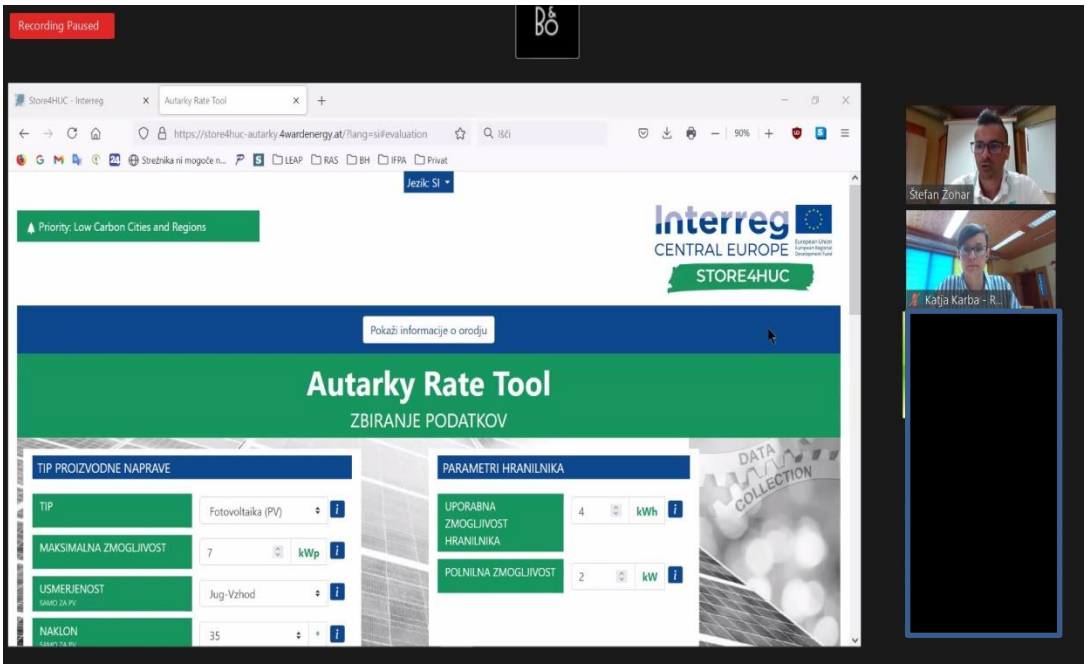
6.3. Pictures

6.3.1. Germany;

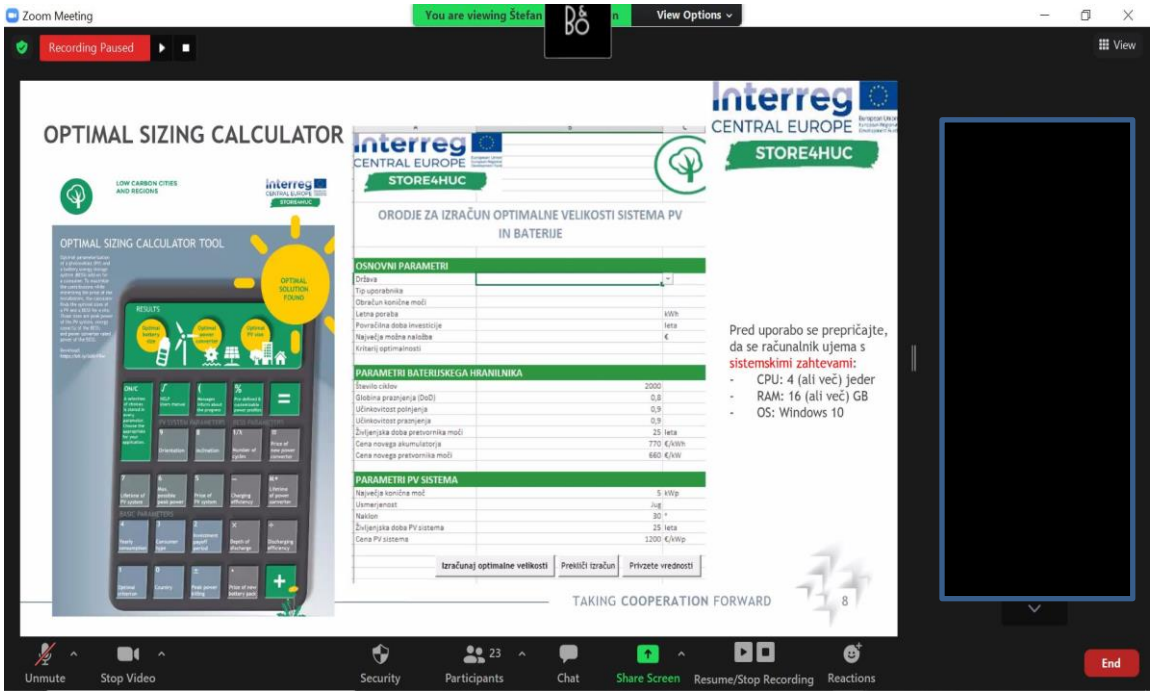


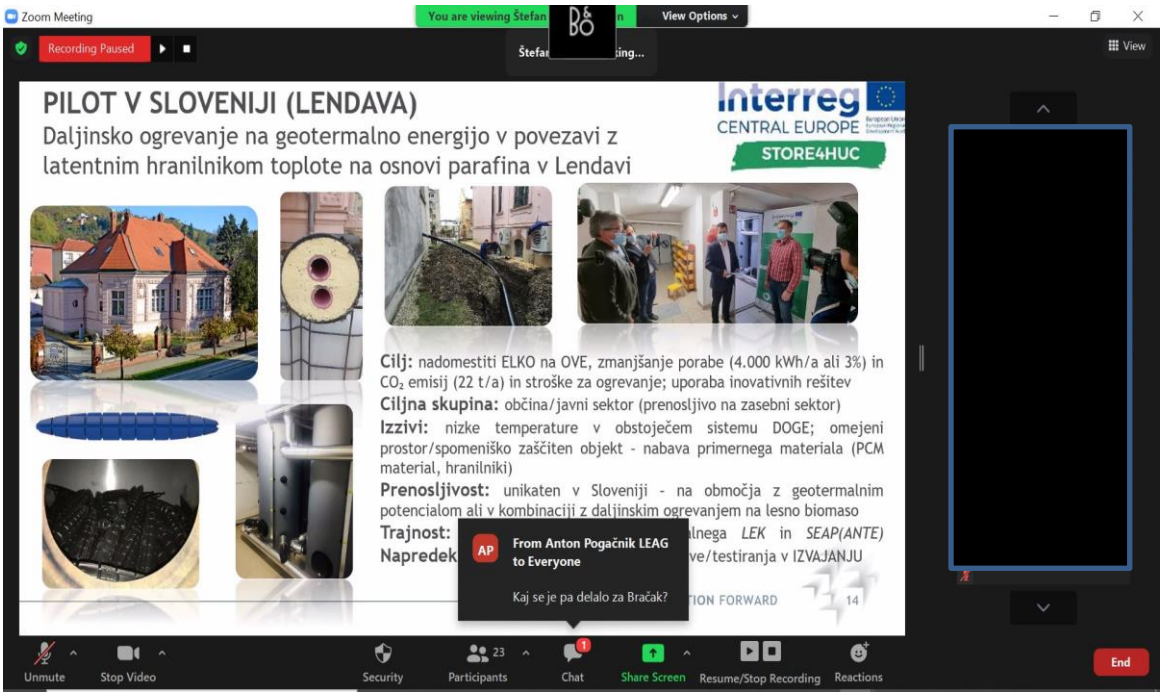
6.3.2. Slovenia;






Zoom Meeting
Recording Paused
View
Unmute
Stop Video
End


Zoom Meeting
You are viewing Štefan
View Options
Recording Paused
View
OPTIMAL SIZING CALCULATOR
OPTIMAL SIZING CALCULATOR TOOL
ORODJE ZA IZRAČUN OPTIMALNE VELIKOSTI SISTEMA PV IN BATERIJE
OSNOVNI PARAMETRI
PARAMETRI BATERIJSKEGA HRANILNIKA
PARAMETRI PV SISTEMA
Izračunaj optimalne velikosti
Prekliči izračun
Privzete vrednosti
Pred uporabo se prepričajte, da se računalnik ujema s sistemskimi zahtevami:
- CPU: 4 (ali več) jeder
- RAM: 16 (ali več) GB
- OS: Windows 10
TAKING COOPERATION FORWARD
Unmute
Stop Video
Security
Participants
Chat
Share Screen
Resume/Stop Recording
Reactions
End


Zoom Meeting
Recording Paused
You are viewing Štefan
View Options
View
PILOT V SLOVENIJI (LENDAVA)
Daljinsko ogrevanje na geotermalno energijo v povezavi z latentnim hranilnikom toplote na osnovi parafina v Lendavi
Interreg
CENTRAL EUROPE
STORE4HUC
Cilj: nadomestiti ELKO na OVE, zmanjšanje porabe (4.000 kWh/a ali 3%) in CO_2 emisij (22 t/a) in stroške za ogrevanje; uporaba inovativnih rešitev
Ciljna skupina: občina/javni sektor (prenosljivo na zasebni sektor)
Izzivi: nizke temperature v obstoječem sistemu DOGE; omejeni prostor/spomeniško zaščiten objekt - nabava primernega materiala (PCM material, hranilniki)
Prenosljivost: unikaten v Sloveniji - na območja z geotermalnim potencialom ali v kombinaciji z daljinskim ogrevanjem na lesno biomaso
Trajnost:
Napredek
lnega LEK in SEAP(ANTE)
ve/testiranja v IZVAJANJU
TION FORWARD
14
AP
From Anton Pogačnik LEAG to Everyone
Kaj se je pa delalo za Bračak?
Unmute
Stop Video
Security
Participants
23
Chat
Share Screen
Resume/Stop Recording
Reactions
End

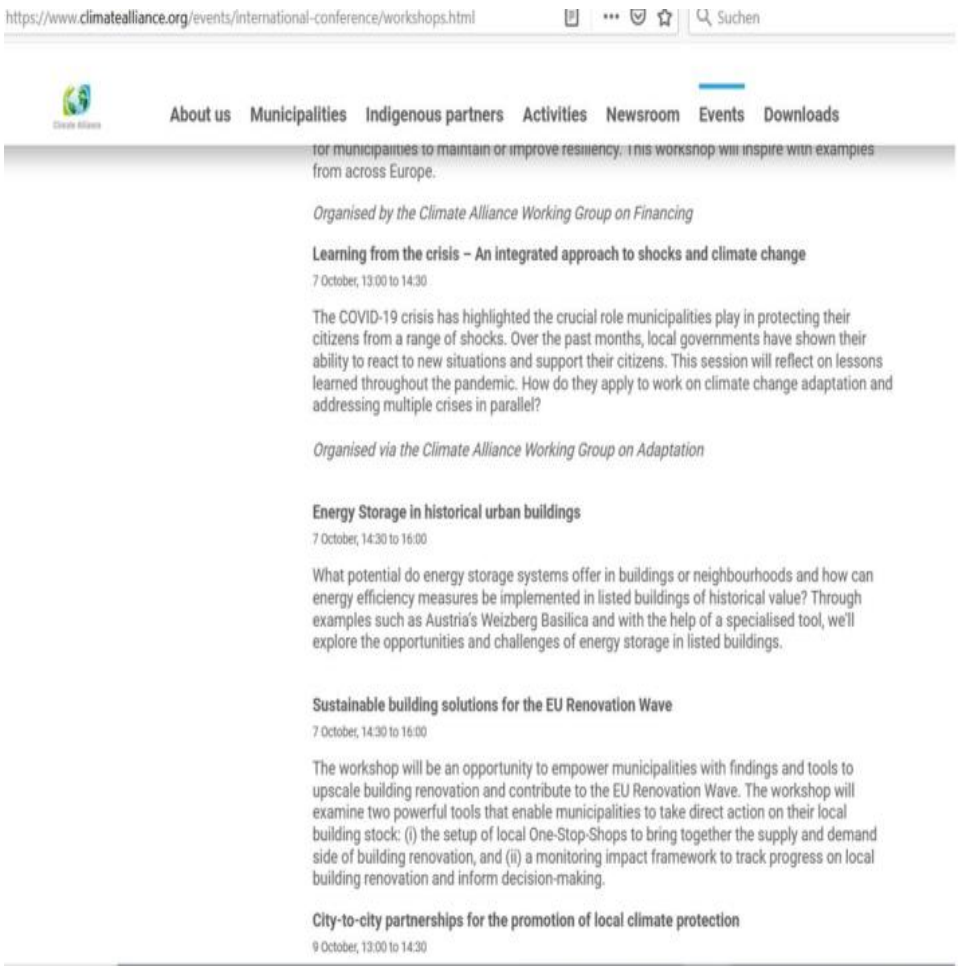
6.3.3. Austria;

6.3.4. Italy;

6.3.5. Croatia;

6.4. Media coverage

6.4.1. Germany;


https://www.climatealliance.org/events/international-conference/workshops.html

Suchen

About us | Municipalities | Indigenous partners | Activities | Newsroom | Events | Downloads

for municipalities to maintain or improve resiliency. This workshop will inspire with examples from across Europe.

Organised by the Climate Alliance Working Group on Financing

Learning from the crisis – An integrated approach to shocks and climate change

7 October, 13:00 to 14:30

The COVID-19 crisis has highlighted the crucial role municipalities play in protecting their citizens from a range of shocks. Over the past months, local governments have shown their ability to react to new situations and support their citizens. This session will reflect on lessons learned throughout the pandemic. How do they apply to work on climate change adaptation and addressing multiple crises in parallel?

Organised via the Climate Alliance Working Group on Adaptation

Energy Storage in historical urban buildings

7 October, 14:30 to 16:00

What potential do energy storage systems offer in buildings or neighbourhoods and how can energy efficiency measures be implemented in listed buildings of historical value? Through examples such as Austria's Weizberg Basilica and with the help of a specialised tool, we'll explore the opportunities and challenges of energy storage in listed buildings.

Sustainable building solutions for the EU Renovation Wave

7 October, 14:30 to 16:00

The workshop will be an opportunity to empower municipalities with findings and tools to upscale building renovation and contribute to the EU Renovation Wave. The workshop will examine two powerful tools that enable municipalities to take direct action on their local building stock: (i) the setup of local One-Stop-Shops to bring together the supply and demand side of building renovation, and (ii) a monitoring impact framework to track progress on local building renovation and inform decision-making.

City-to-city partnerships for the promotion of local climate protection

9 October, 13:00 to 14:30


Von Service- und Kompetenzzentrum: Kommunaler Klimaschutz via Nationale Klimaschutzinitiative des Bundesumweltministeriums <skkk@klimaschutz.de>

Betreff **Neues vom SK:KK**

An w.hofstetter@klimabuendnis.org

Klima-Bündnis Digital Days 2020 (Dienstag, 6.Oktober, bis Freitag, 9. Oktober 2020 | Online)

Wie können Städte und Gemeinden sowohl nachhaltiger als auch widerstandsfähiger aus der Corona-Krise hervorgehen? Welchen Weg werden Kommunen und unsere Gesellschaft zukünftig einschlagen? Wie kann die Krise eine Chance für eine Klimawende darstellen? Mit diesen Fragen können sich die Teilnehmer*innen der „Klima-Bündnis Digital Days" bei Online-Workshops und virtuellen Diskussionen beschäftigen. Mehr erfahren

6.4.2. Slovenia;

N/A

6.4.3. Austria;

klimaaktiv

Bundesministerium Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie

Bauen & Sanieren | Energiesparen | Erneuerbare Energie | Mobilität | Service | Förderungen | Über uns

- Erneuerbare Wärme
- Multitalent Biogas
- Effiziente Heizwerke
  - Was ist QM Heizwerke?
  - Beratungsförderung
  - Zufriedene Kundinnen und Kunden
  - Ansprechpartner
  - Qualitätsbeauftragte
  - Werkzeuge und Hilfsmittel
  - Best Practice Beispiele
- Energieholz
- Bioökonomie
- Missionzero

Erneuerbare Energie » Effiziente Heizwerke » Best Practice Beispiele » Zentraler Wärmespeicher in Weizberg

Zentraler Wärmespeicher in Weizberg

Trotz des Standorts in einem ortsbildgeschützten Stadtteil gelang die Integration eines zentralen Wärmespeichers in das bestehende Heizwerk in Weizberg als wesentlicher Beitrag für einen optimierten Betrieb.

© Weizer Energie- Innovationszentrum GmbH

Das Nahwärmenetz und das Heizwerk in Weizberg wurden 1999 errichtet. Die Wärmeversorgung der 12 Abnehmer – die größten darunter sind ein Hotelbetrieb und die Pfarre Weizberg – wird durch zwei mit regionalem Waldhackgut befeuerte Biomassekessel mit gesamt 840 kW Nennleistung sichergestellt. Der bisherige Betrieb der Kesselanlage des Heizwerkes ohne zentralen Wärmespeicher brachte Nachteile mit sich. Einerseits mussten die Kessel größtenteils im Teil- bzw. Schwachlastbereich, mit erhöhten Brennstoffverbräuchen sowie Schadstoffemissionen betrieben werden. Aufgrund des fehlenden zentralen Speichers wurde außerdem das Wärmenetz als thermischer Puffer genutzt, verbunden mit entsprechend hohen Wärmeverlusten des Netzes.

Im Rahmen des Interreg Central Europe Projektes Store4HUC gelang die Integration eines zentralen Wärmespeichers mit 33.000 Liter in das bestehende Heizwerk trotz des Standorts in einem denkmal- und ortsbildgeschützten Stadtteil. Ein weiterer innovativer Ansatz ist die Implementierung einer neuen Regelung mit einem vollintegrierten, intelligenten Lastmanagement. Durch die gegenseitige Kommunikation aller Anlagenkomponenten (Kesselanlage, zentraler Speicher, Netz) inklusive Zugriff auf die Regelung von dezentralen Speichern bei den Abnehmern, wird ein gesamtheitlich optimierter Betrieb des Heizwerks sowie des Nahwärmenetzes umgesetzt.

Weitere Optimierungsmaßnahmen zur Senkung der Rücklauftemperaturen, Einbindung zusätzlicher Warmwasserspeicher und Regelungsoptimierung wurden bei den größten Abnehmern im Netz umgesetzt bzw. sind geplant.

10.06.2021

meinbezirk.at | Nachrichten | Leben | Fotos & Videos | Veranstaltungen | Jobs | Marktplatz | Community

zu Favoriten

Biomasse-Heizwerk am Weizberg wurde erweitert

2. August 2021, 15:07 Uhr

Das Biomasseheizwerk am Weizberg wurde erweitert und feierlich im Beisein von Gesellschafter, Partner und Ehrengästen geweiht. Foto: Andreas

Kleine Zeitung

Zwölf Abnehmer | Biomasse-Heizwerk am Weizberg wurde ausgebaut

In einem Interreg-Projekt wurde das Biomasseheizwerk auf dem Weizberg modernisiert und ausgebaut.

Von **Raimund Heigl** | 13.00 Uhr, 23. Juli 2021

ARTIKEL MERKEN

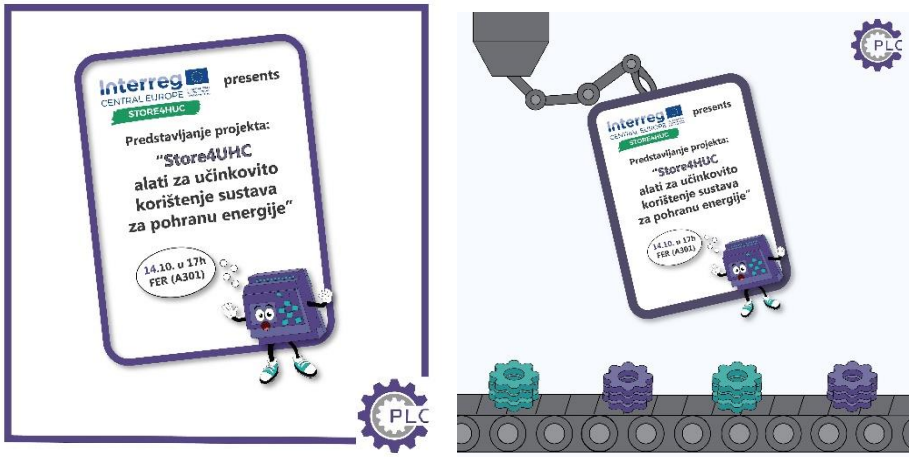
Im Jahr 1999 wurde das Nahwärmenetz auf dem **Weizberg** errichtet und versorgt seither zwölf Abnehmer, darunter als größte die **Pfarre Weizberg** mit der Basilika und das **Hotel Ederer**. "Es war in den 90er-Jahren ein Pionierprojekt, das damals von der Stadt Weiz gegen jede wirtschaftliche Vernunft unterstützt wurde", erinnerte sich Vizebürgermeister **Oswin Donnerer** bei der Präsentation des jetzt vorgenommenen Ausbaus. Ein zentraler Wärmespeicher wurde eingebaut und das Heizhaus vergrößert. Durch neue Anlagenkomponenten ist das Werk jetzt **effizienter und auch umweltschonender**. So konnten die Verteilverluste über die Sommermonate um run d40 Prozent reduziert werden. Durch die Erhöhung des Wirkungsgrades der Brennstofkessel

Pfarrer Toni Herk-Pickl segnete den Zubau des Heizwerks auf dem Weizberg
© Raimund Heigl

6.4.4. Italy;

N/A

6.4.5. Croatia;



6.5. Web-links

6.5.1. Germany;

Anmeldung hier

Weitere Informationen:

- Organisiert vom Klima-Bündnis-Projektteam Store4HUC.
- Dr. Wolfgang Hofstetter, Tel. +49-69-717139-13, w.hofstetter(at)climatealliance.org

Klima-Bündnis Digital Days
LOKALE WEGE AUS DER KRISE
online vom 6.–9. Oktober | #CADigitalDays

Store4HUC lädt Sie ein zur Teilnahme an den Climate Alliance Digital Days

Die Veranstaltung findet statt im Rahmen der Climate Alliance Digital Days vom 6. - 9. Oktober 2020. Sie sind herzlich eingeladen, auch an anderen Veranstaltungen der Reihe teilzunehmen.

Informationen und Programm finden Sie auf der Homepage des Klima-Bündnis hier

Bitte melden Sie sich zur kostenfreien Veranstaltungsreihe hier an. Sie erhalten dann Einwahldaten zugeschickt.

https://www.interreg-central.eu/Content.Node/news/Participate-in-our-first-international-workshop-.html

https://archive.newsletter2go.com/?n2g=ka648rqf-8zqmxq0j-bpa

6.5.2. Slovenia;

N/A

6.5.3. Austria;

Zentraler Wärmespeicher in Weizberg, klimaaktiv

Biomasse-Heizwerk am Weizberg wurde erweitert - Weiz (meinbezirk.at)

Zwölf Abnehmer: Biomasse-Heizwerk am Weizberg wurde ausgebaut « kleinezeitung.at

6.5.4. Italy;

https://www.cuneodice.it/eventi/monregalese/a-ormea-convegno-su-la-biomassa-legnosa-fonte-di-energia-sostenibile_54941.html

https://notizie.provincia.cuneo.gov.it/?p=53456

https://www.cn.camcom.it/it/focus/internazionalizzazione/progetti-europei/alcotra-piter-pays-sages/pays-ecogetiques/pays

6.5.5. Croatia;

https://www.facebook.com/187351683366957/posts/232615222173936/?d=n