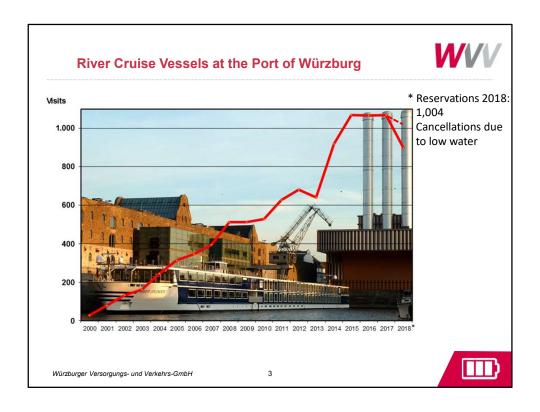


A little bit about me!

This is the group where I work. Just the red ones are important. I work for the power company and the port company in Würzburg.

For over 10 years we have been learning and getting better and better at shore power.

So why we had to been getting better?

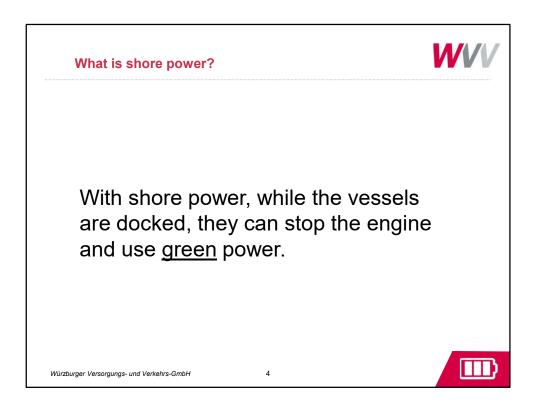


This is a the wonderful story from the river cruise business

These are the numbers from Würzburg.

We see here comparing 2000 to 2018 that there have been 1000 more visits! I know that in Vienna there are more than 1000 ships per year, But you can see the development.

We asked ourselves how we could make it more environmentally friendly. We also sell energy? So we think that we can use shore power! And then we made it become reality.



So what is shore Power. Sometimes they call it Cold Ironing.

And this is not only for image improvement purposes. You can save a lot of dieselfuel.

Reasons



- To avoid noise pollution
- To avoid fine dust (PM)
- To avoid nitrogen oxides (NOx)
- To avoid carbon emissions (CO2)
- To avoid vibrations

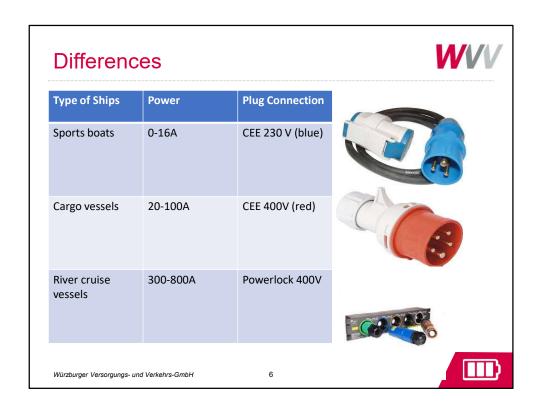
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The reasons to be greener in the waterway business. Maybe some of you know about the bans European cities put on diesel cars... Well, it is the same story on the waterways.

So yes, we also use diesel fuel on the river. We can see how to avoid these things.

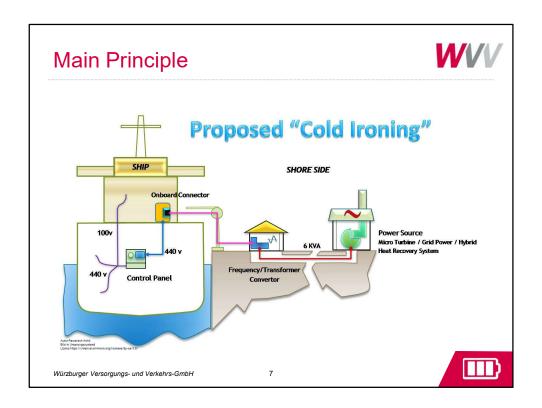


Sports boats need up to 16 ampere, which they usually get with the blue connector.

Cargo vessels and the smaller white fleet need a little bit more.

And for river cruise ships you need a lot more power.
Here, these connectors became standard. They are called Powerlock.
Here, 5 cables are connected and the crew can handle it easily.
For all connections you need about 20 minutes.
If you put all 5 lines in one cable it is too heavy.
They are all low voltage systems because it is safer.

From now I'll talk about the last one, because there is so much energy in this power supply.



Here you see the shore power system

At the moment, we are talking about directly using the energy for kitchen, light, air conditioning and the other hotel needs on board.

But maybe in the future shore power can also be used for charging batteries.

The investment would vary widely. I can't give you any numbers because it is not a one-size-fits all model.

The bigger part of the investment in the shore power system is for the transformer and cables underground.

I call it the public part.

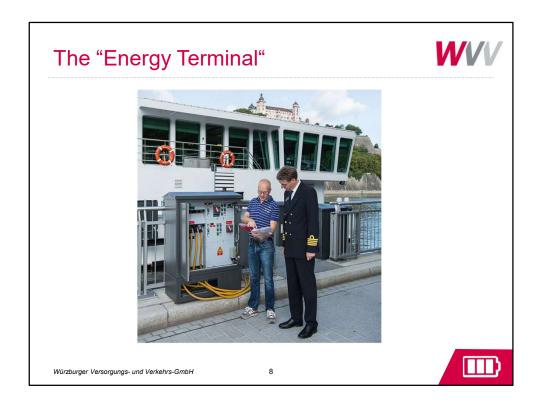
Most of the time you need your own transformer station for the system.

Think about it. 3 or 4 ships need more energy than a small village.

That's why you need your own transformer.

You have to talk with your local power company about the possibility of getting a transformer.

Is it possible? What do you need to make it possible?



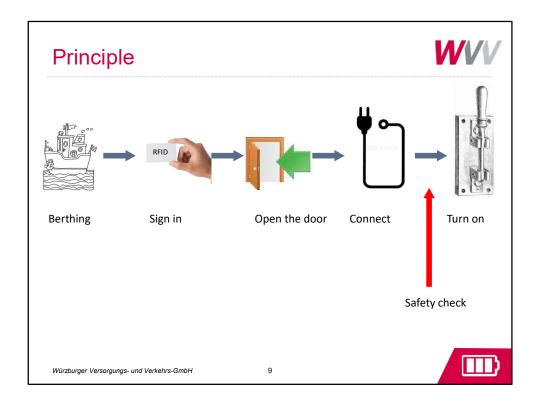
This is our product. 2 powerlock systems in 400A each.

It is set up along the European waterways. Moselle, Rhein, Main and Danube hopefully soon.

And now a praise to the shipping companies. The ships can do that. All of them have the onboard systems. They have enough cables.

So we need more shore power <u>stations</u> along the rivers.

Then we will become greener.

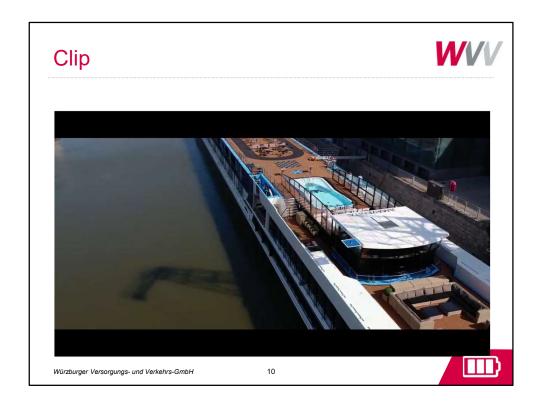


Now a little bit more about the principle.

It has to be easy! Or the ship staff will not implement it.

When the ship lands for the first time give the captain the instructions and the chip card.

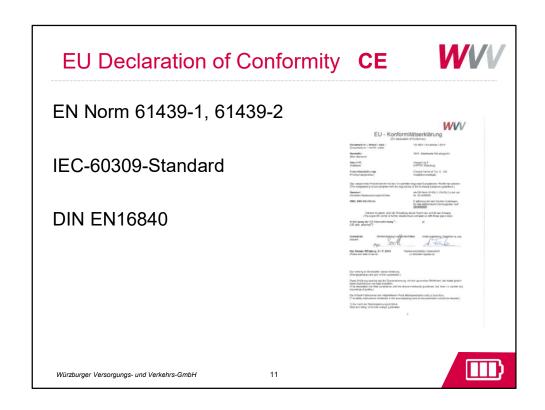
After that the crew can use the system without staff on site ...no key, no staff very easy and very fast



For better understanding here is a short clip.

Sorry the clip is in German but pictures says more than words

https://www.youtube.com/watch?v=eEW9sHu5Bfs&t=14s



If you want to build your own shore power system you have to observe some standards.
You have to register the system with the CE in the European Union and ensure conformity with the standards.

You need the box and you need software for billing for the services and monitoring the electricity meter. Those are the two parts of the system.

The Message



It is possible to use shore power

It is a little bit complicated to set up your own system but you can buy ready made systems.

And it is safe, profitable and green!

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If you want to know more visit our homepage!