

PPS-jaarrapportage 2019

De PPS-en die van start zijn gegaan onder aansturing van de topsectoren dienen jaarlijks te rapporteren over de inhoudelijke en financiële voortgang. Voor de inhoudelijke voortgang dient dit format gebruikt te worden. Voor PPS-en die in 2019 zijn afgerond is een apart format "PPS-eindrapportage" beschikbaar.

De jaarrapportages worden integraal gepubliceerd op de website het TKI's. Zorg er svp voor dat er geen vertrouwelijke zaken in staan.

De PPS-jaarrapportages dienen voor 1 maart 2020 te worden aangeleverd bij finance@tki-bbe.nl.

Algemene gegevens	
PPS-nummer	BBE 1710
Titel	BIOCOAL in decentrale toepassingen
Roadmap	TKI toeslag industrieel onderzoek
Uitvoerende kennisinstelling(en)	TNO
Projectleider onderzoek (naam + emailadres)	Pedro Abelha – pedro.abelha@tno.nl
Penvoerder (namens private partijen)	TNO
Contactpersoon overheid (indien relevant)	Kees de Gooijer
Adres projectwebsite	
Startdatum	1-9-2017
Einddatum	31-12-2020

Goedkeuring penvoerder / consortium

De jaarrapportage dient te worden besproken met de penvoerder/het consortium. TKI BBE neemt graag kennis van evt. opmerkingen over de jaarrapportage.

De penvoerder heeft namens het consortium de jaarrapportage goedgekeurd
 niet goedgekeurd

Evt. opmerkingen over de jaarrapportage:

Inhoudelijke samenvatting van het project

Probleemomschrijving	Biomass is an important sustainable source of heat production and can contribute for the government policy that stimulates the production of heat on a small scale, replacing natural gas. However, there are a number of important factors that must be well organized to make use of local low-grade biomass. The availability is limited, and therefore the energy utilization rate must be as high as possible and the combustion of biomass must not lead to emission problems and must take place as clean and complete as possible. However, many local flows cannot be used without upgrading by drying, pelleting or heat treatment such as torrefaction - the BIOCOAL pellets.
Doelen van het project	This project aims for the successful testing of "normal" pellets and BIOCOAL pellets in lab-scale combustion installations with extensive analysis of combustion performance and emissions. This will explicitly look at the use of various low-grade woody biomass species. Combustion tests of low-value biomass pellets and low-value torrefied biomass pellets in different small-scale boilers will be carried out for the purpose of determining the possible range for this application. The potential impact for the sector involves the use of cheaper and locally

	available woody biomass for the production of heat, technically it will become clear how the boiler combustion chamber should be designed and what the impact is on emissions. From a social point of view, emissions can be reduced, the mineral cycle can be closed locally and the use of low-quality biomass for heat generation will be more sustainable.
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Resultaten	
Beoogde resultaten 2019	<ul style="list-style-type: none"> - Compare the combustion performance of high quality wood pellets with the BIOCOAL pellets made from high quality wood – A1 plus EN 14961-2 - Compare the combustion performance of waste wood pellets with the BIOCOAL pellets made from waste wood – B quality EN 14961-2 - Evaluate the combustion performance of low quality biomass BIOCOAL pellets – EN 14961-6 quality - Evaluate the possibility of closing the mineral cycle loop by returning the ash elements back to the soils.
Behaalde resultaten 2019	<ul style="list-style-type: none"> - The BIOCOAL pellets made from good quality wood – A1 plus quality EN 14961-2 – perform slightly better than the wood pellets producing slightly lower emissions of NOX, SO2, HCl and PM. The combustion efficiency of the boiler was also slightly superior with the BIOCOAL pellets. - The BIOCOAL pellets made from waste wood – B quality EN 14961-2 – perform significantly better than the waste wood pellets producing significantly lower emissions of NOX, SO2, HCl and PM. The combustion efficiency of the boiler was also significantly superior with the BIOCOAL pellets. - The ash minerals can be returned back to the soil by incorporation in fertilizers production.
Beoogde resultaten 2020	<ul style="list-style-type: none"> - Compare the combustion performance of grass pellets with the BIOCOAL pellets made from grass – EN 14961-6 quality

Opgeleverde producten in 2019 (geef de titels en/of omschrijvingen van de producten / deliverables of een link naar de producten op de projectwebsite of andere openbare websites)
<u>Wetenschappelijke artikelen:</u>
<u>Externe rapporten:</u>
<ul style="list-style-type: none"> - A progress report from TNO was produced (limited access) - A final report is under preparation (limited access) - A final public report will be available.
<u>Artikelen in vakbladen:</u>
<u>Inleidingen/posters tijdens workshops, congressen en symposia:</u>
<ul style="list-style-type: none"> - An oral presentation was given at the Groot TKI-overleg TKI-BBE-1710, Wageningen 11 September - An oral presentation was given at the 6th CEBC Graz, Austria 22nd to 24th January 2020

- A visual presentation was given at the 28th EUBCE | Virtual, on-line 6th to 9th July 2020

TV/ Radio / Social Media / Krant:

Overig (Technieken, apparaten, methodes etc.):