



DEVELOPMENT OF TRANSFORT BIOFUELS USING AGRICULTURAL RESIUAL BIOMASS AND DEDICATED CROPS

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CONTENT

Projects on Strategic Topics:
"BIOTRANSPORT"



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GEI AND CC- OVERVIEW

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PERÚ



MOCOA



GEI and CC- OVERVIEW

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The Nevado del Ruiz has had 47 square kilometers of snow, today it reaches only 9.7 square kilometers. (06-03-2015)

TRANSPORT FUELS

- ✓ Most are liquids and gases that come from oil and gas.
- ✓ They are responsible for a fifth of anthropogenic greenhouse gas (GHG) emissions.
- ✓ In order to avoid environmental problems, especially those caused by climate change, biomass-derived fuels such as bioethanol and biodiesel are also used, first-generation biofuels.



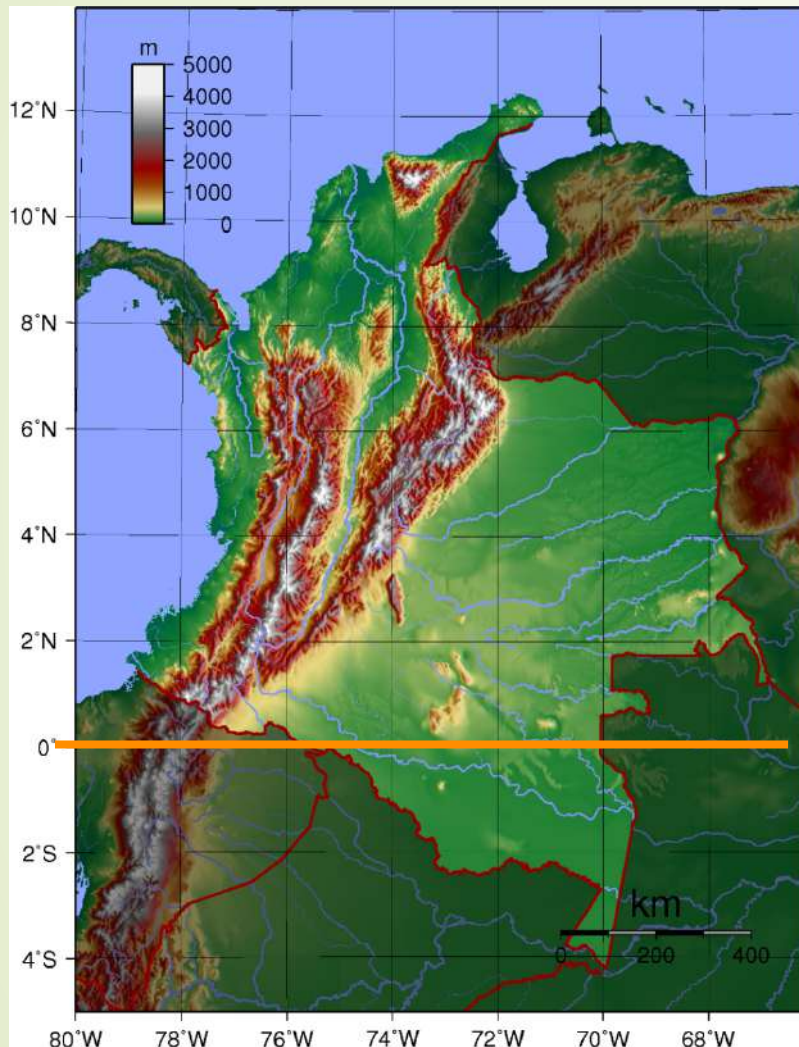
NETWORK AND BIOTRANSPORT PROGRAM

The Ibero-American Network for the use of organic waste in the production of Energy - Bioenergy was founded in 2012 through the Ibero-American Program of Science and Technology for Development (CYTED) with the collaboration of IANAS.

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OVERVIEW

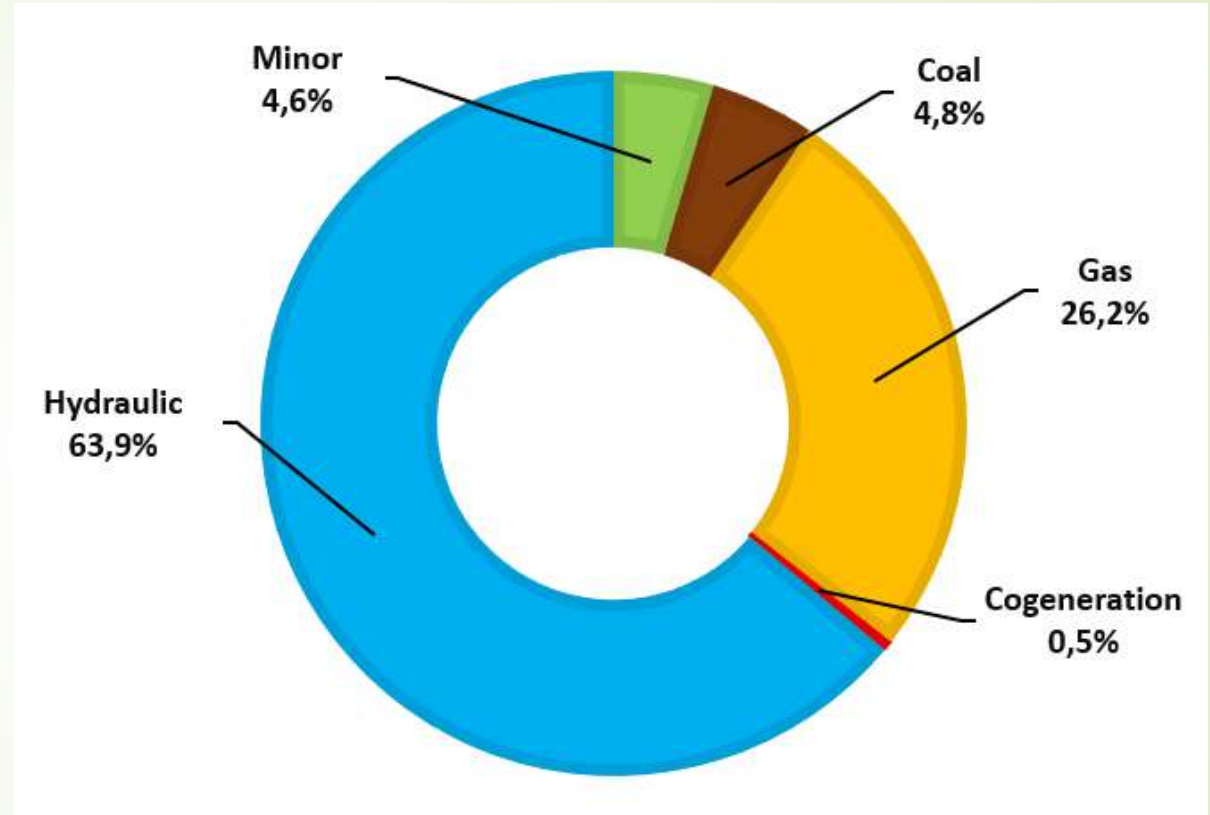


Source: <http://www.lahistoriaconmapas.com/atlas/colombia-maps/mapa-cordilleras-de-colombia.htm>

- ✓ Located in the northwest side of South America.
- ✓ The Latin America's most important mountain range, the Andes, divides into three branches within the Colombian territory.
- ✓ Variety of climates determined by altitude (temperature drop in 1°C for every 160 meters).
- ✓ The climate remains relatively stable year round, with a dry season from December to March and July to August; and intense rains from April to June and October to November.

POWER GENERATION IN COLOMBIA

Under normal hydrologic conditions, 80% of generation is hydroelectric. In dry season, thermal generation becomes important and comes to meet up to more than 50% of the energy demand in the country.

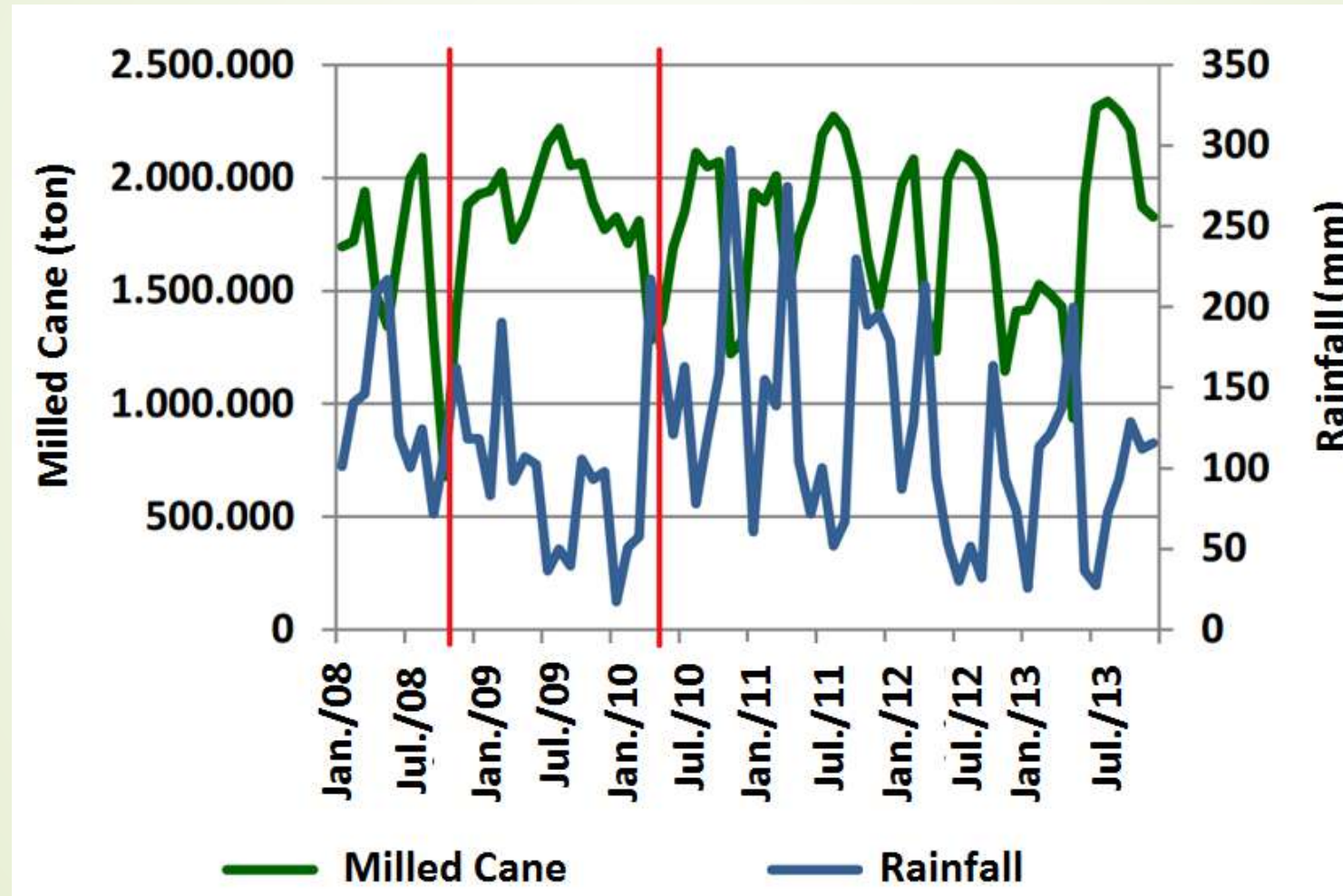


Source: (UPME, 2015)

Participation by source of installed
capacity 2014

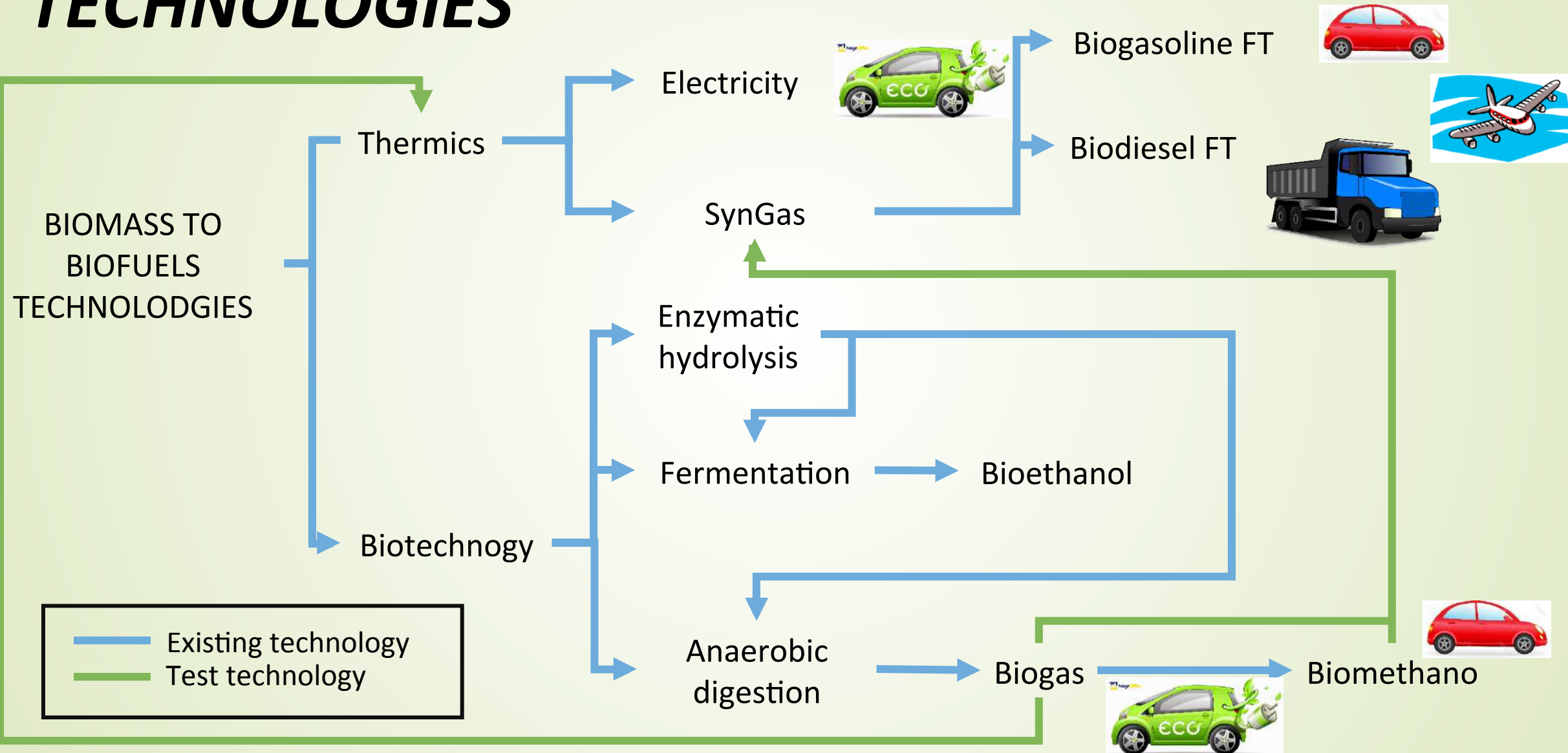
COMPLEMENTARITY SUGAR CANE PRODUCTION WITH HYDRO GENERATION

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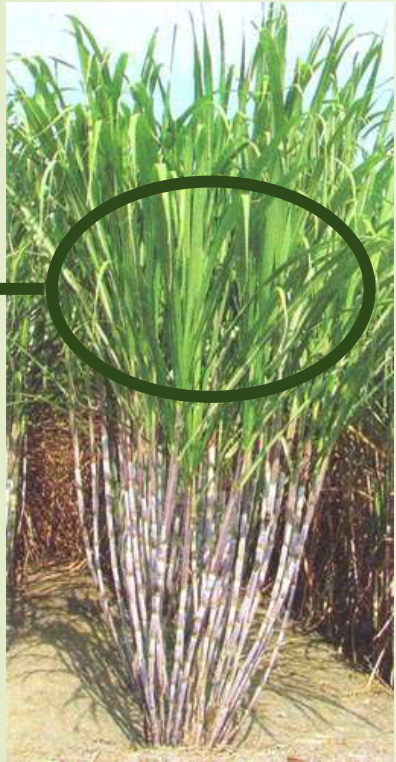
BtL BIOTRANSPORT TECHNOLOGIES

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BIOFUEL FROM SUGAR CANE

Energy Plant



Source: <http://www.pregonagropecuario.com/cat.php?txt=139>

Cane Juice



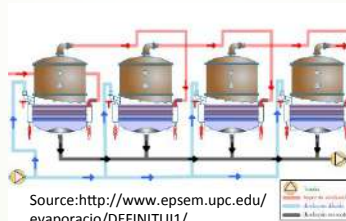
Source: <http://www.taringa.net/post/salud-bienestar/19253219/Propiedades-Nutricionales-y-de-Salud-de-la-Cana-de-Azucar.html>

Molasses



Source: <http://infofartecnologia.blogspot.com.co/2013/03/la-melaza-o-miel-de-cana-aporta.html>

Evaporation



Source: <http://www.epsem.upc.edu/evaporacio/DEFINITIU1/MULTIPLEEFECTO+ALIM.html>

Bagasse



Source: <http://veracruzanos.info/alumnos-obtienen-plastico-biodegradable-del-bagazo-de-cana-de-azucar/>

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Anhydrous alcohol



Sugar



Source: <http://contenido.com.mx/2016/04/8-problemas-que-acarrea-el-consumo-de-azucar/>

Food



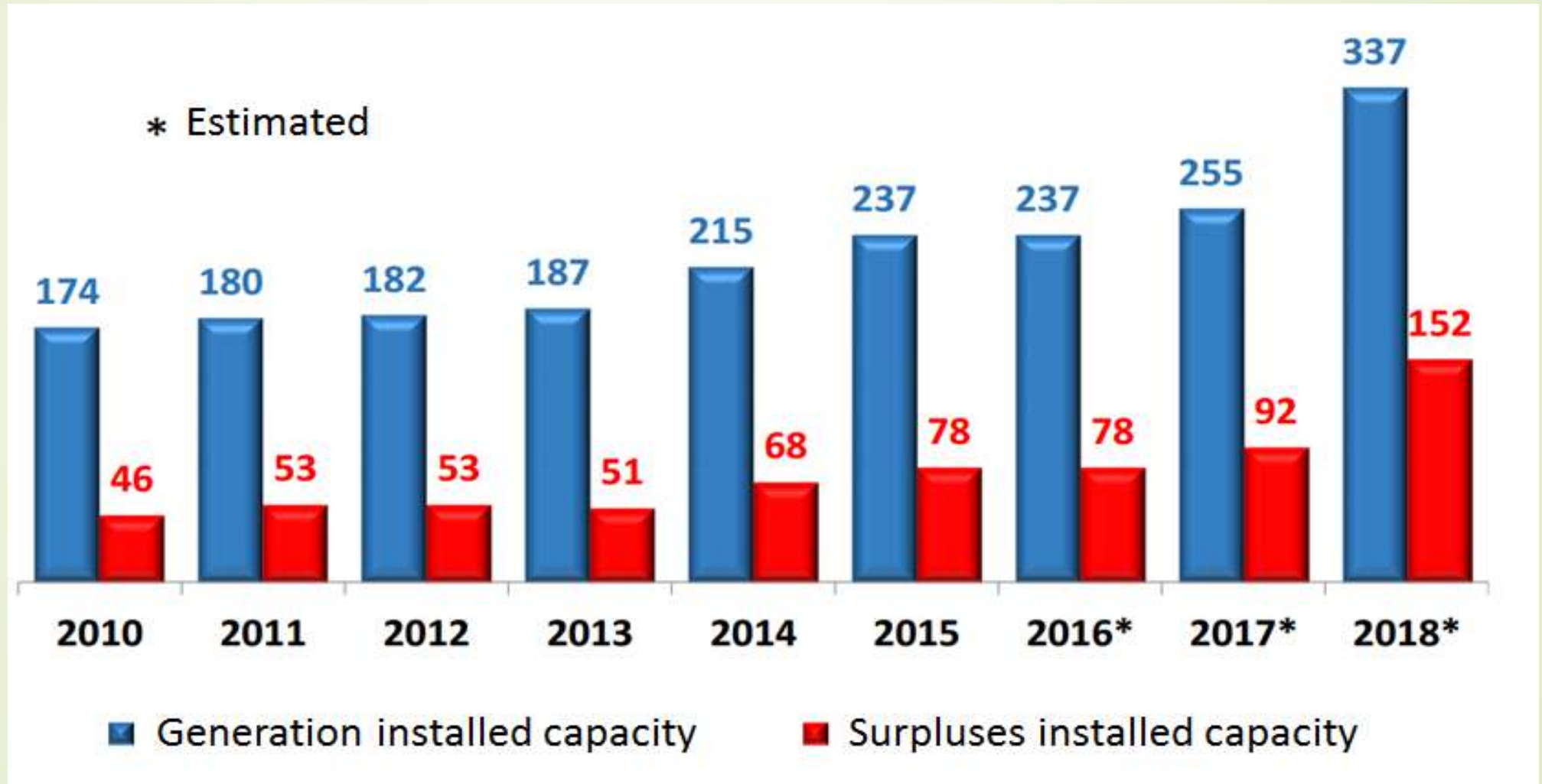
Source: <http://lasdeliciasdesara.weebly.com/postres.html>



Source: <http://r-evolucion.es/wp-content/uploads/2013/07/torres-electricas.jpg>

Installed and projected capacity for power generation in sugar mills (MW)

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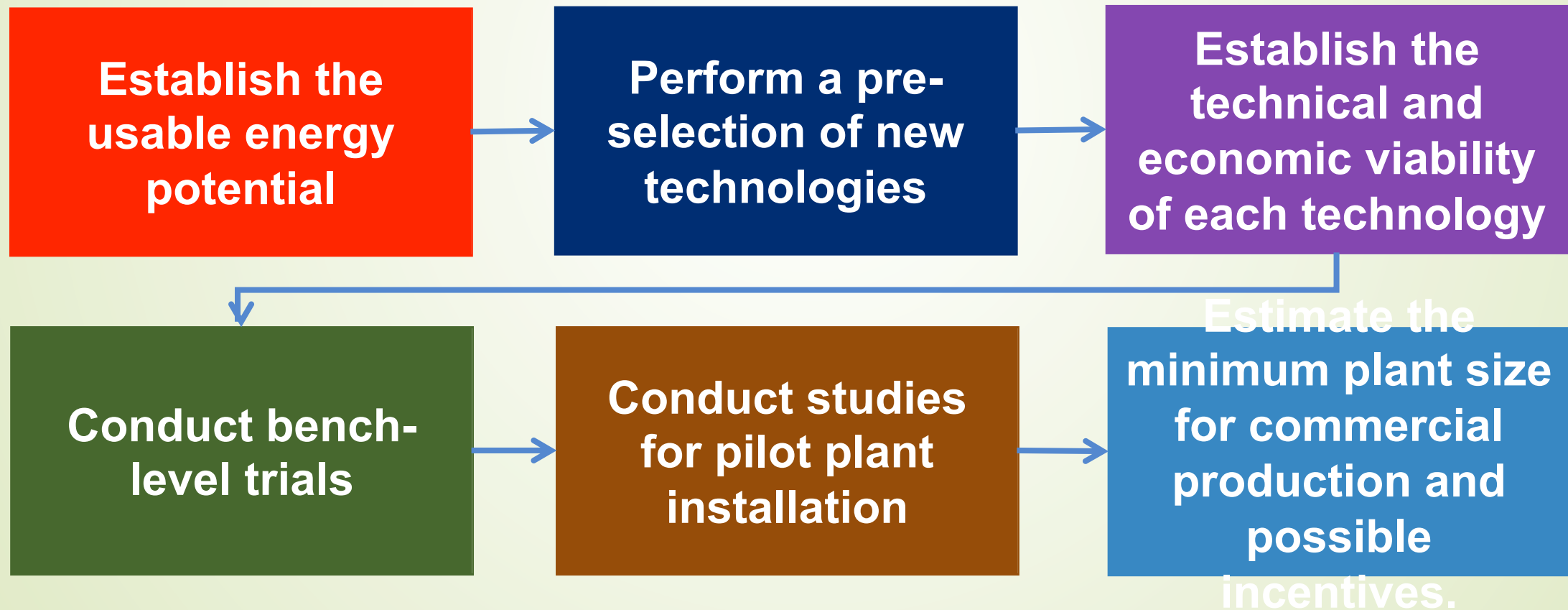


Source: (Londoño, 2016)

Biotransport

PROJECT OBJECTIVES:

General Objective: Investigate new processes of conversion of biomass to transport biofuels



Current stage of the *PROGRAM*

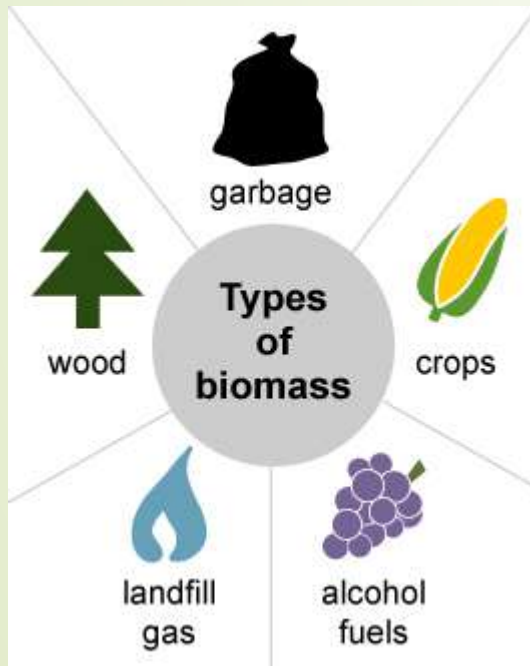
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**Establish the
usable energy
potential**

We are identifying the biomass available in Colombia to determine the total potential and then determine which can be used and in what quantity, in order to find the potential to be harvested.

WE ARE ALSO LOOKING FOR PARTNERS



STATEMENT

- ✓ In general, Residual biomass generated as waste (co-products) during the food production in the agricultural industry is a source of renewable energy. The synergy between food production and bioenergy co-products can help to lower the food prices, and increase the supply of energy sources, avoiding excessive greenhouse gases emission and other pollutants.





THANK YOU