



SunOpta BioProcess Inc.

**From Feedstock to Fuel**

**“Here and Now”**

**Murray Burke, President**

SunOpta BioProcess Inc.

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# SunOpta Inc.

SunOpta, Inc. is a rapidly growing, vertically integrated company with extensive global expertise in sourcing, processing, packaging and distribution of natural, organic and specialty foods.

- Located: Toronto, Ontario  
~90% of operations in US
- Publically-held: NASDAQ: STKL; TSX: SOY
- 2008 Revenue: \$US1.05 billion (projected)

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# Disclaimer

- This presentation contains forward-looking statements
- These forward-looking statements speak only as to management's current expectations
- Forward-looking statements involve risks and uncertainties
- SunOpta BioProcess Inc. disclaims any obligation to update or revise forward-looking statements



# SunOpta Business Units



**SunOpta Food Group**  
~90% of Revenue



**Opta Minerals, Inc.**  
**TSX: OPM (66.3% ownership)**  
~9% of Revenue



**SunOpta BioProcess Inc.**  
**(88% ownership)**  
~1% of Revenue

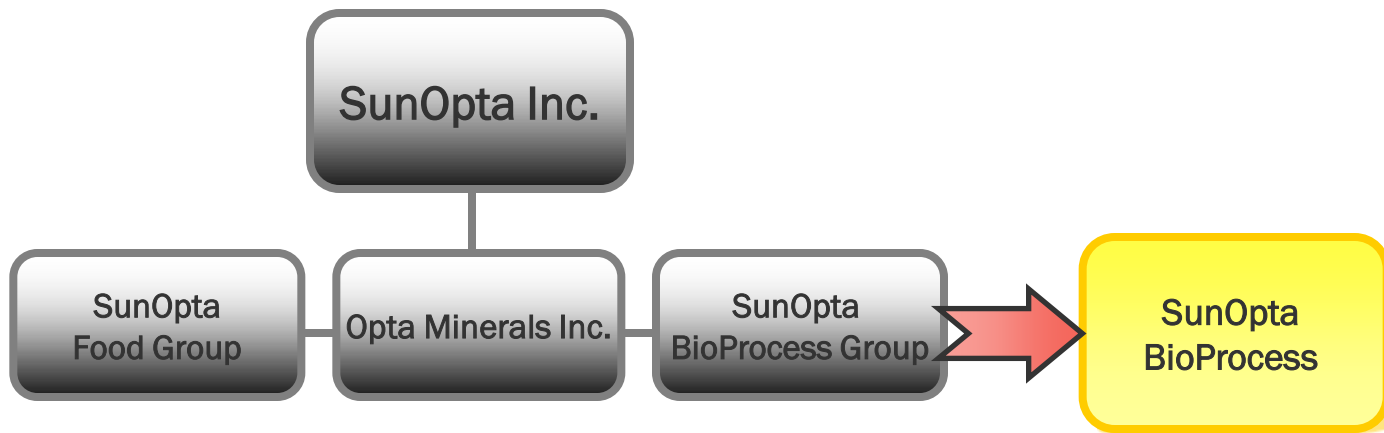


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# SBI Overview

- In June 2007, SunOpta BioProcess was spun-out as a stand-alone entity.
- Raised \$30 million private placement
- \$20+ million cash reserve on-hand



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# SBI Business Overview



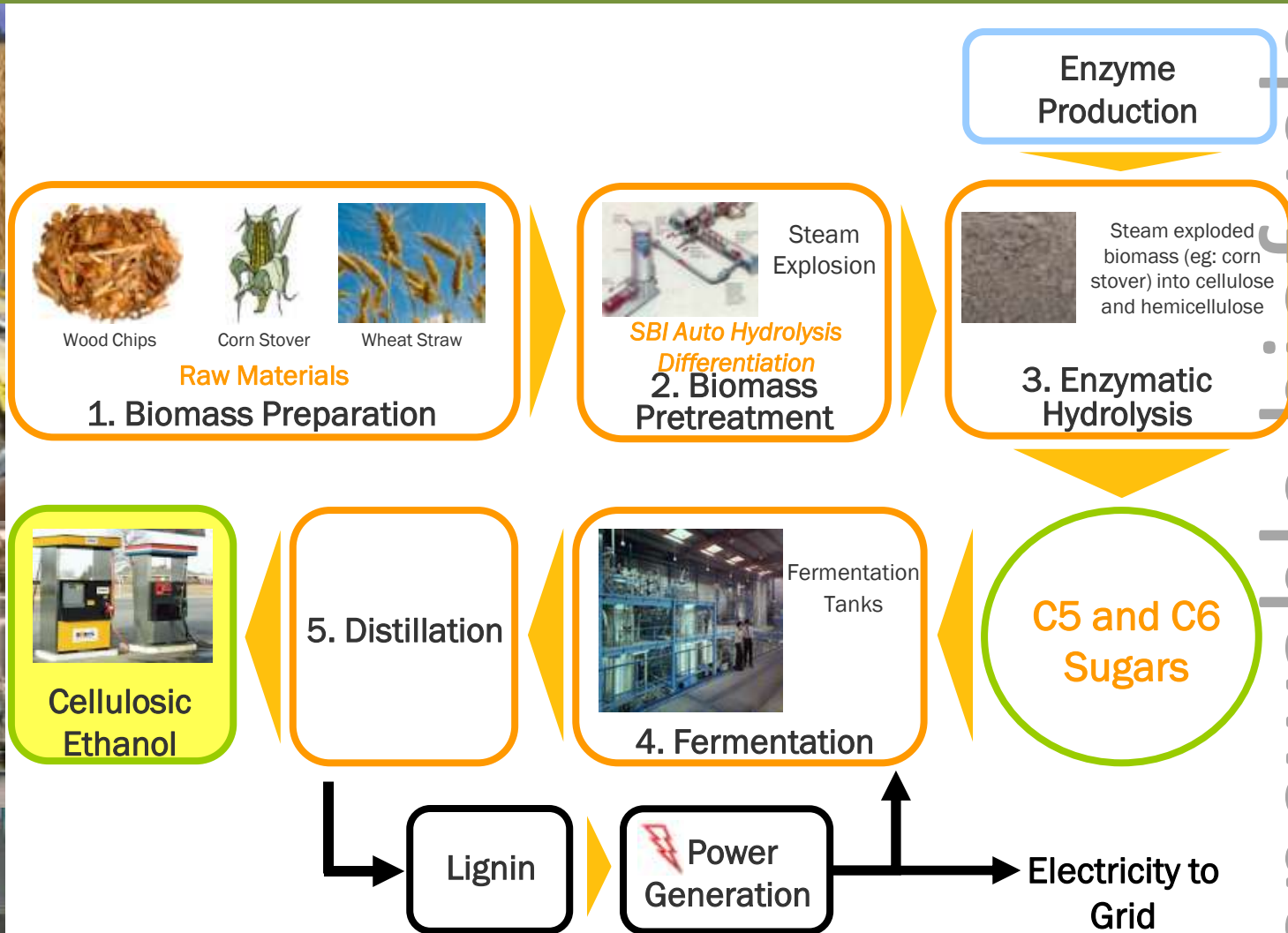
- Leader in the design, construction and optimization of lignocellulosic biomass conversion process technologies,
- Over 30 years experience utilizing a wide variety of feedstocks in the production of animal feed, wood pulp, butanol, ethanol and other products.
- Repositioned to focus tightly on the developing global market for cellulosic ethanol.
- Evolving from a project-based equipment supplier to a fully-integrated supplier of biomass-derived specialty products with a focus on cellulosic ethanol.

# SBI Capabilities



- Key Technologies and Know-how
  - Proven biomass prep and pretreatment (25 to 300 TPD)
  - Fiber preparation and pretreatment designs for over 1,000 TPD
  - Experienced with processing a wide variety of feedstocks
    - Cereal straws
    - Corn stover
    - Hardwoods
    - Oat hulls
    - Energy crops
  - 14 issued patents and 10 patents applied for

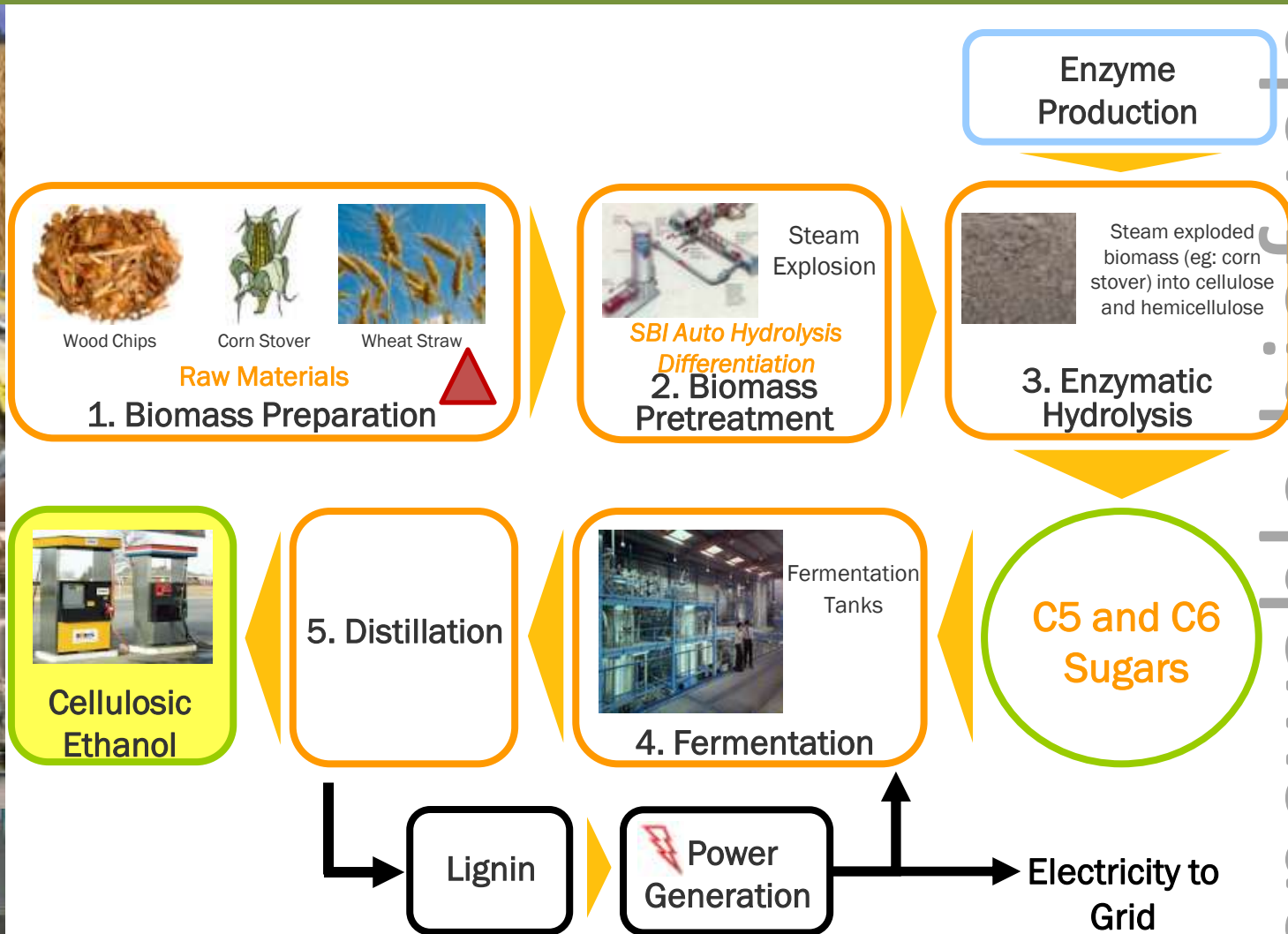
# Cellulosic Ethanol Production Process



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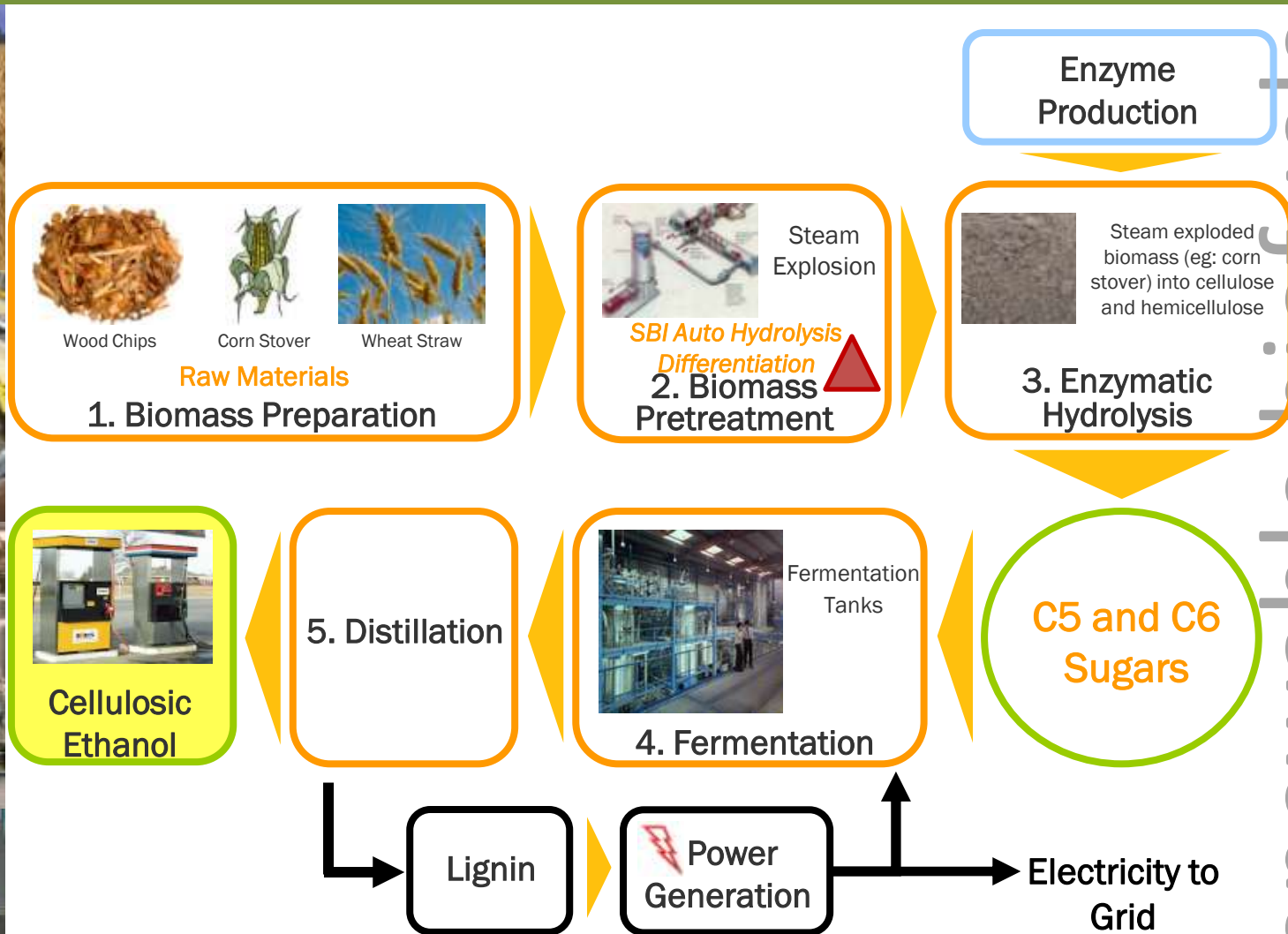


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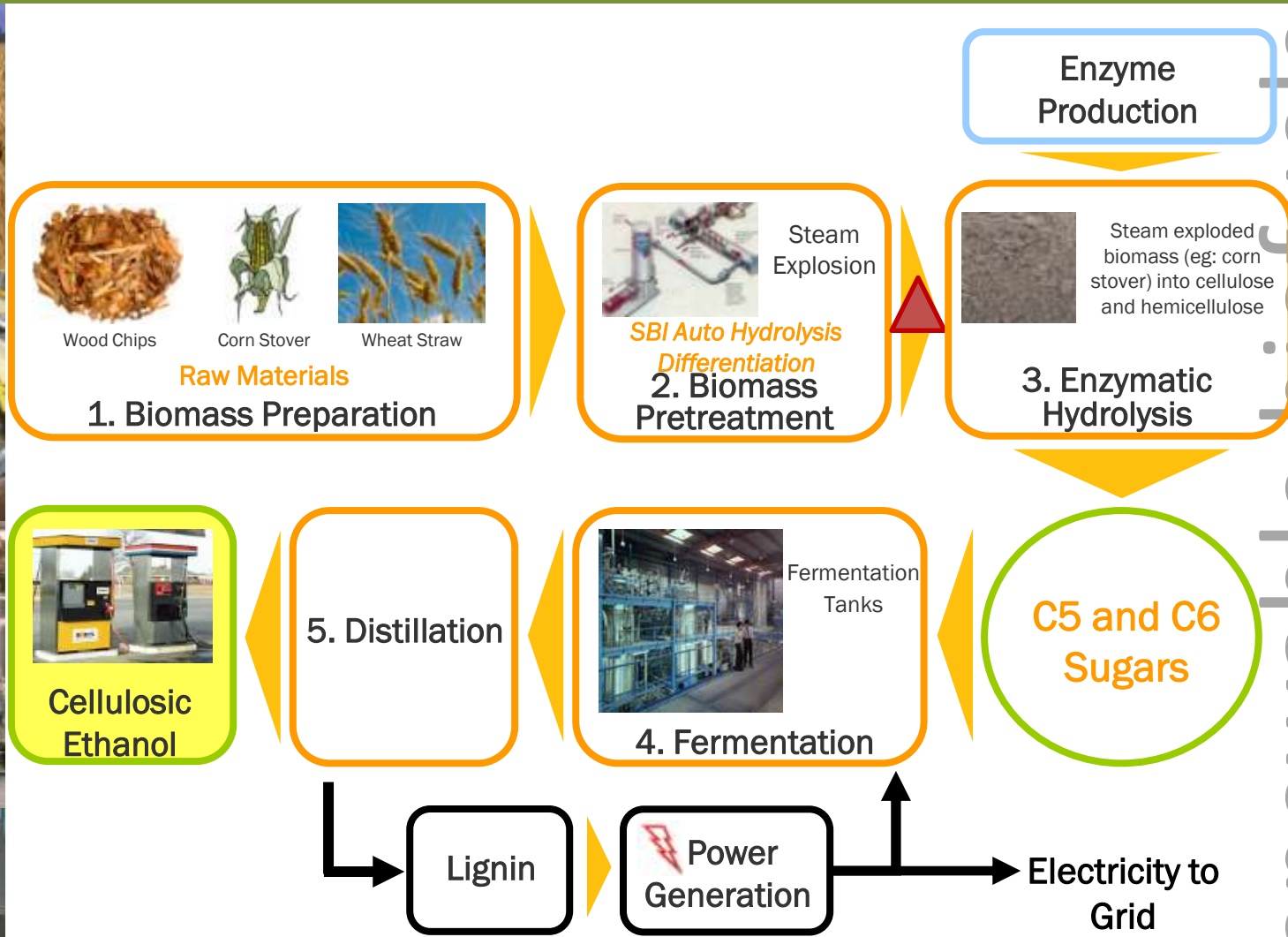
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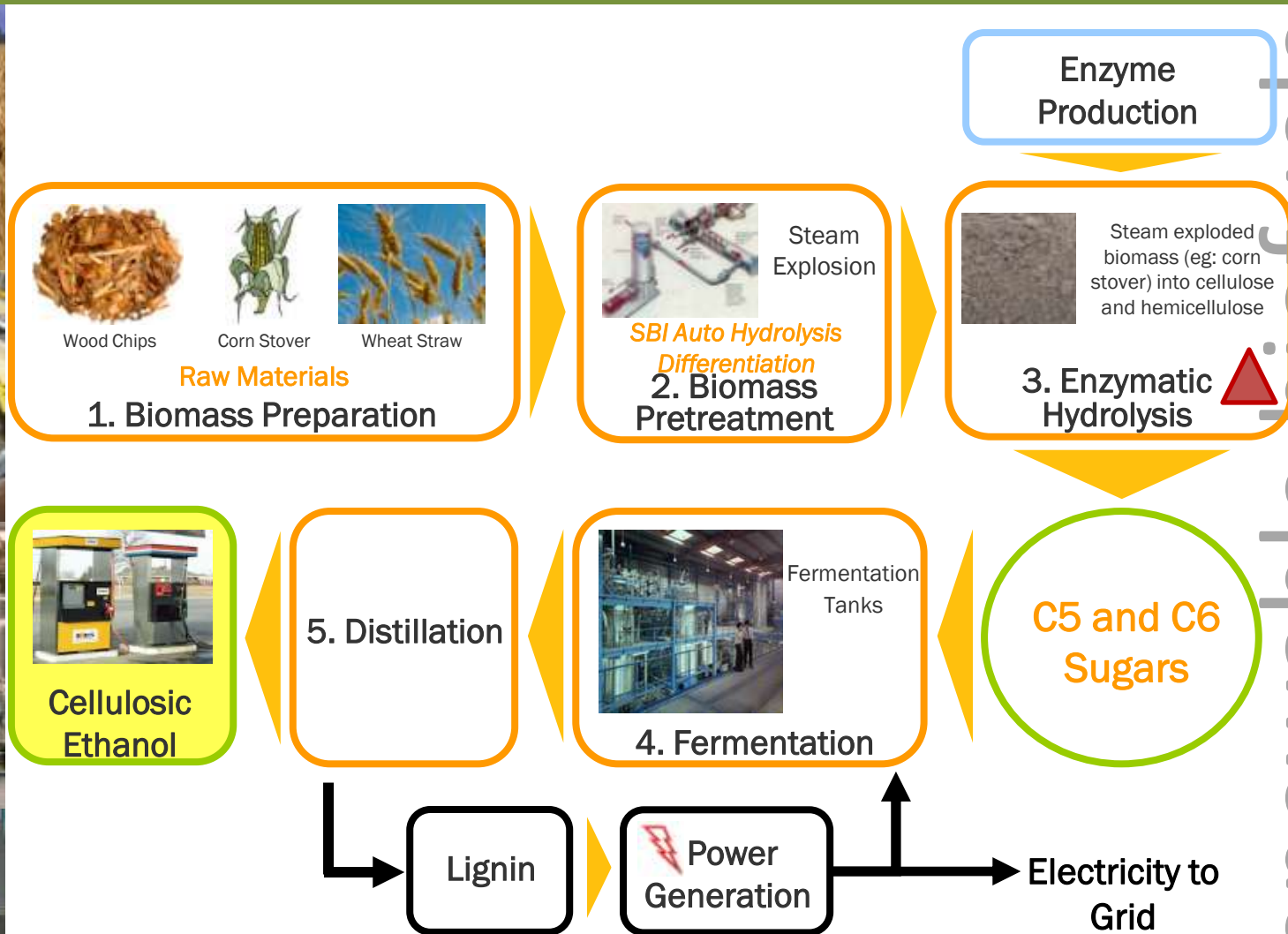
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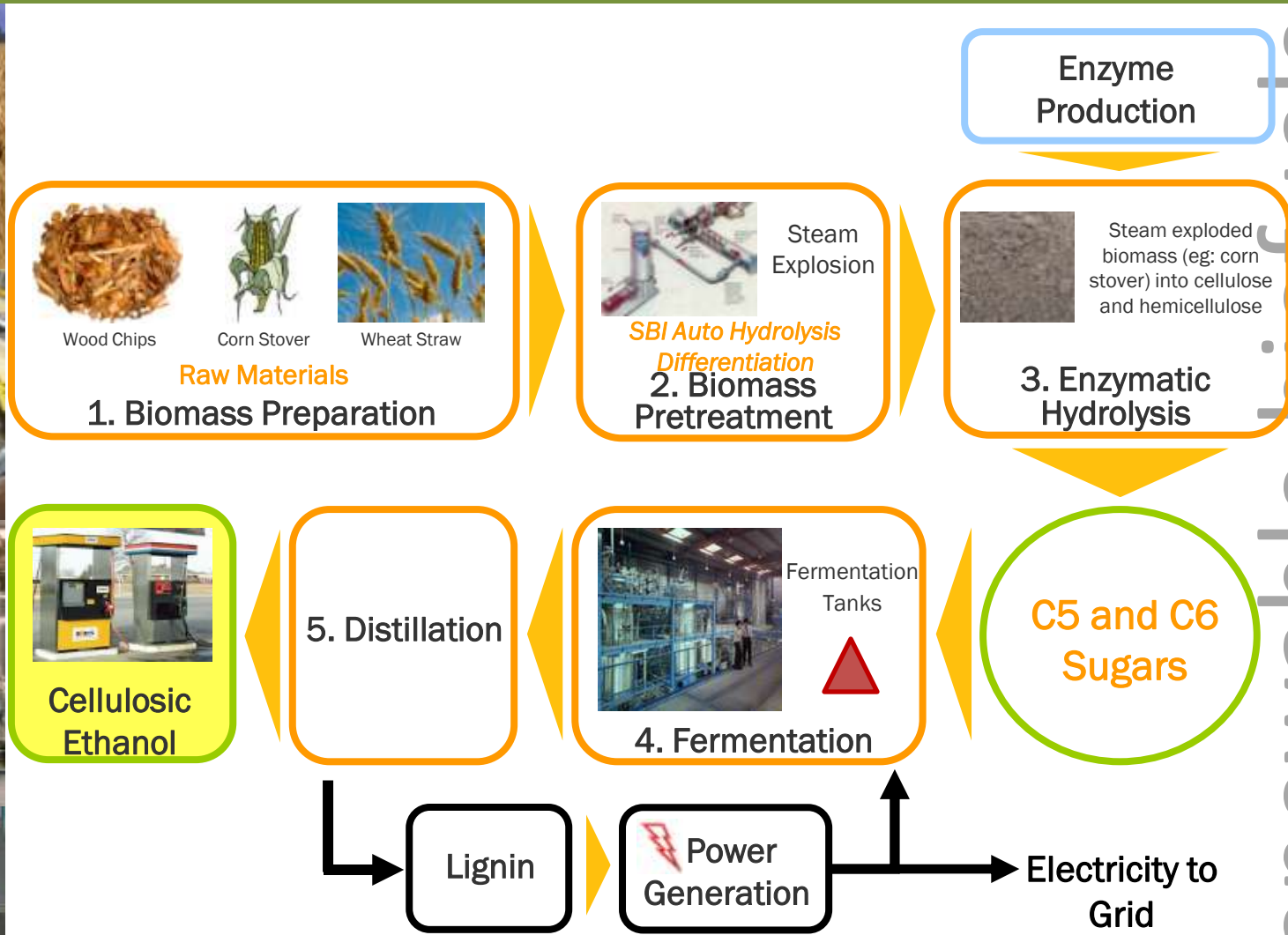
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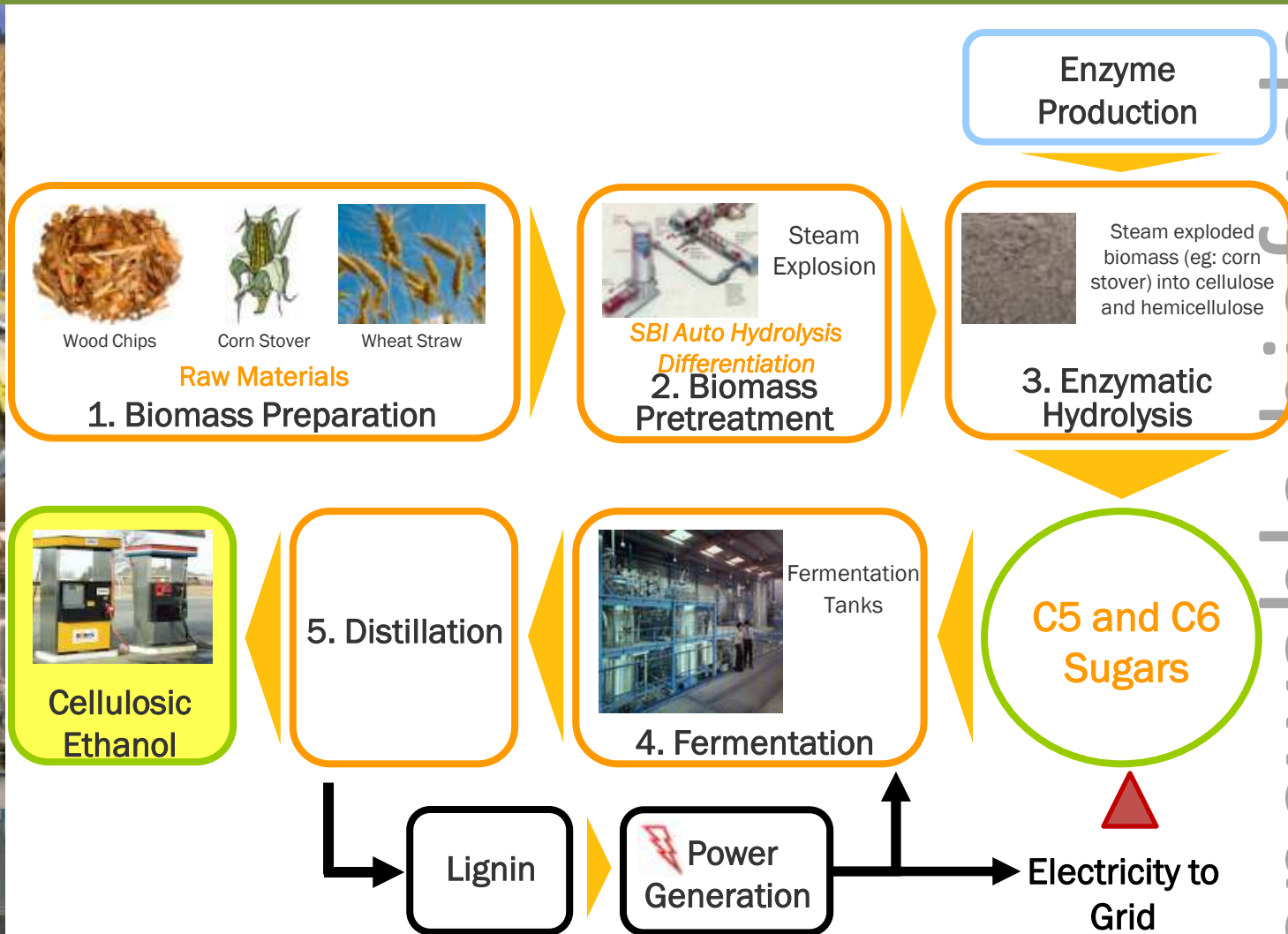


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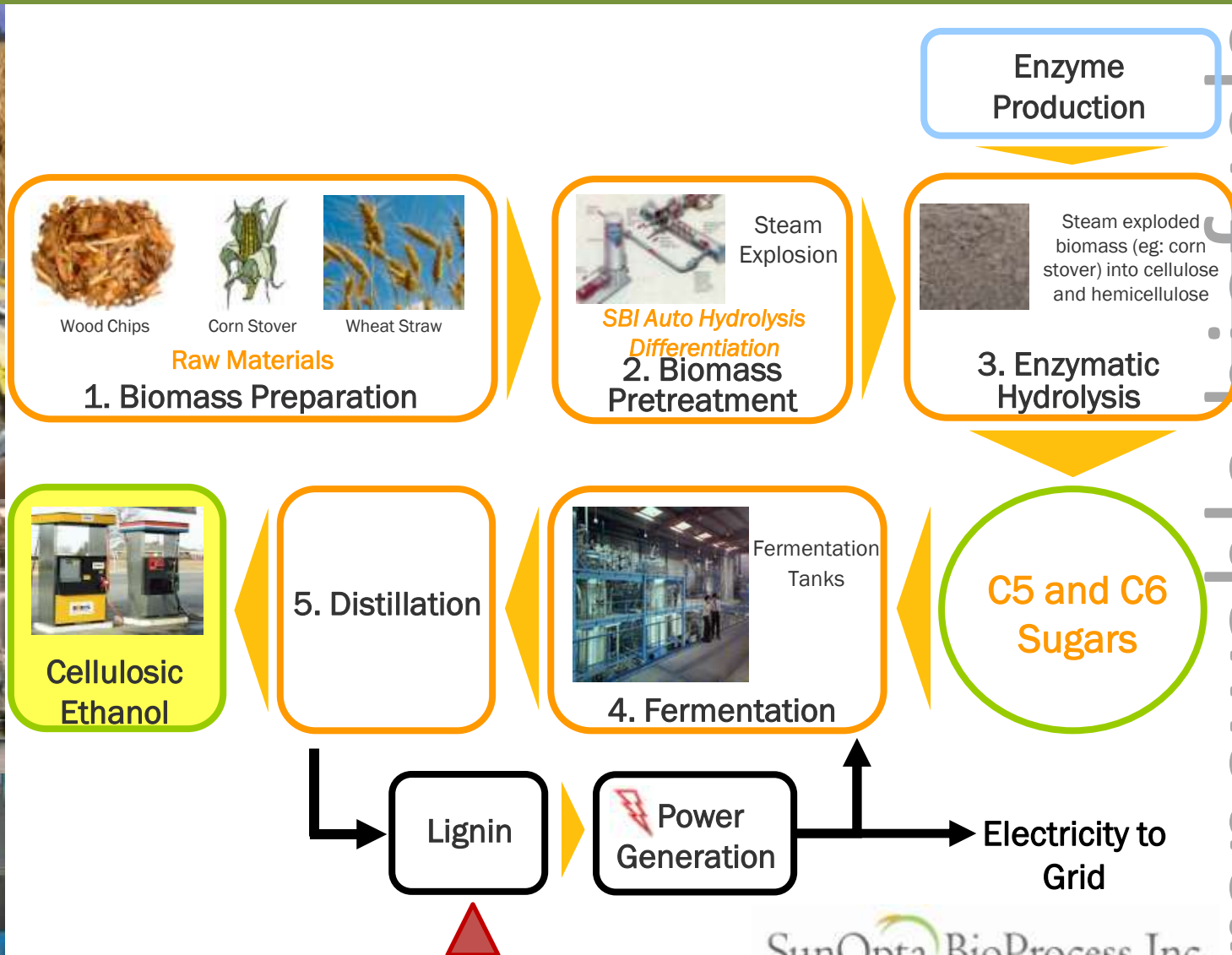
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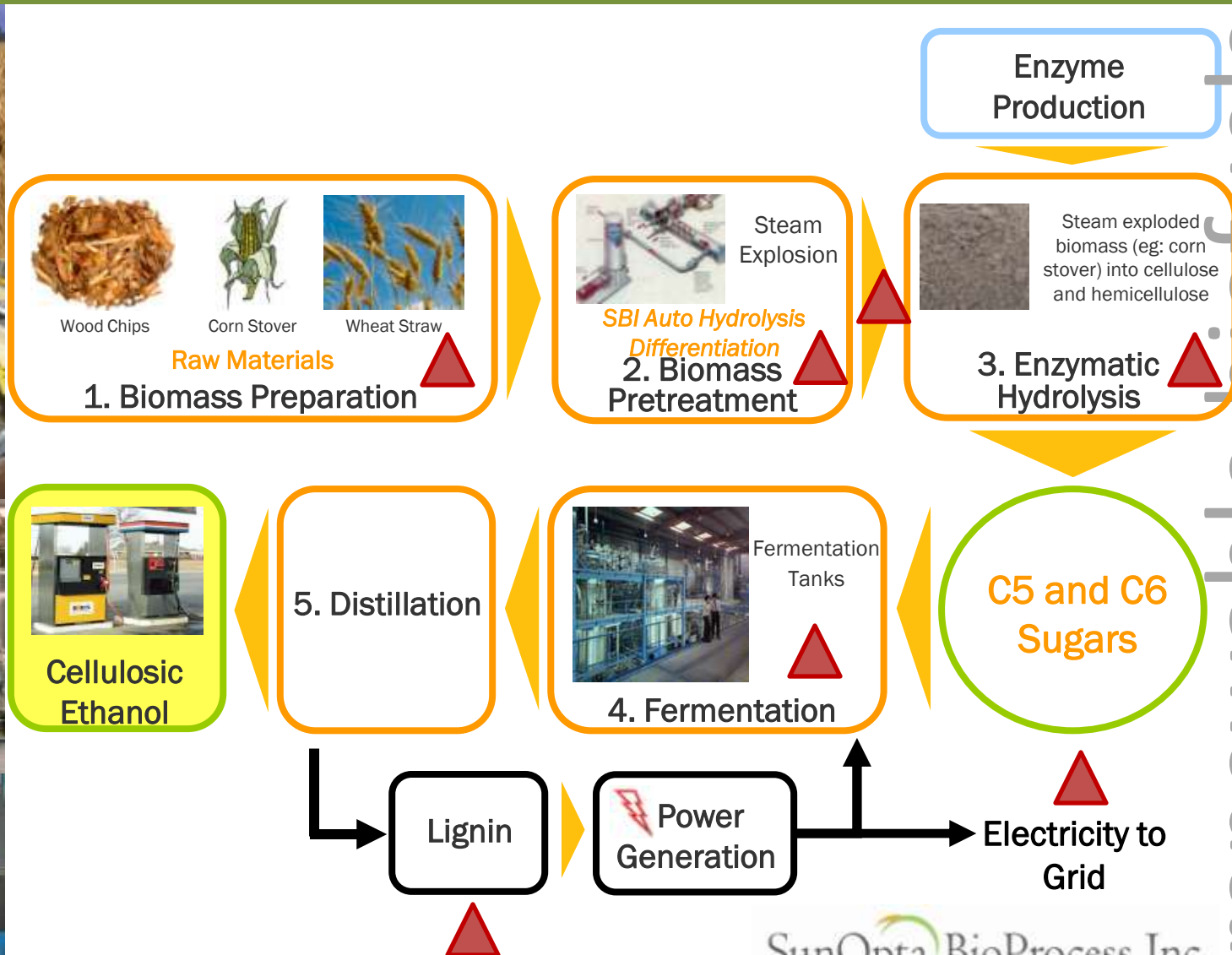
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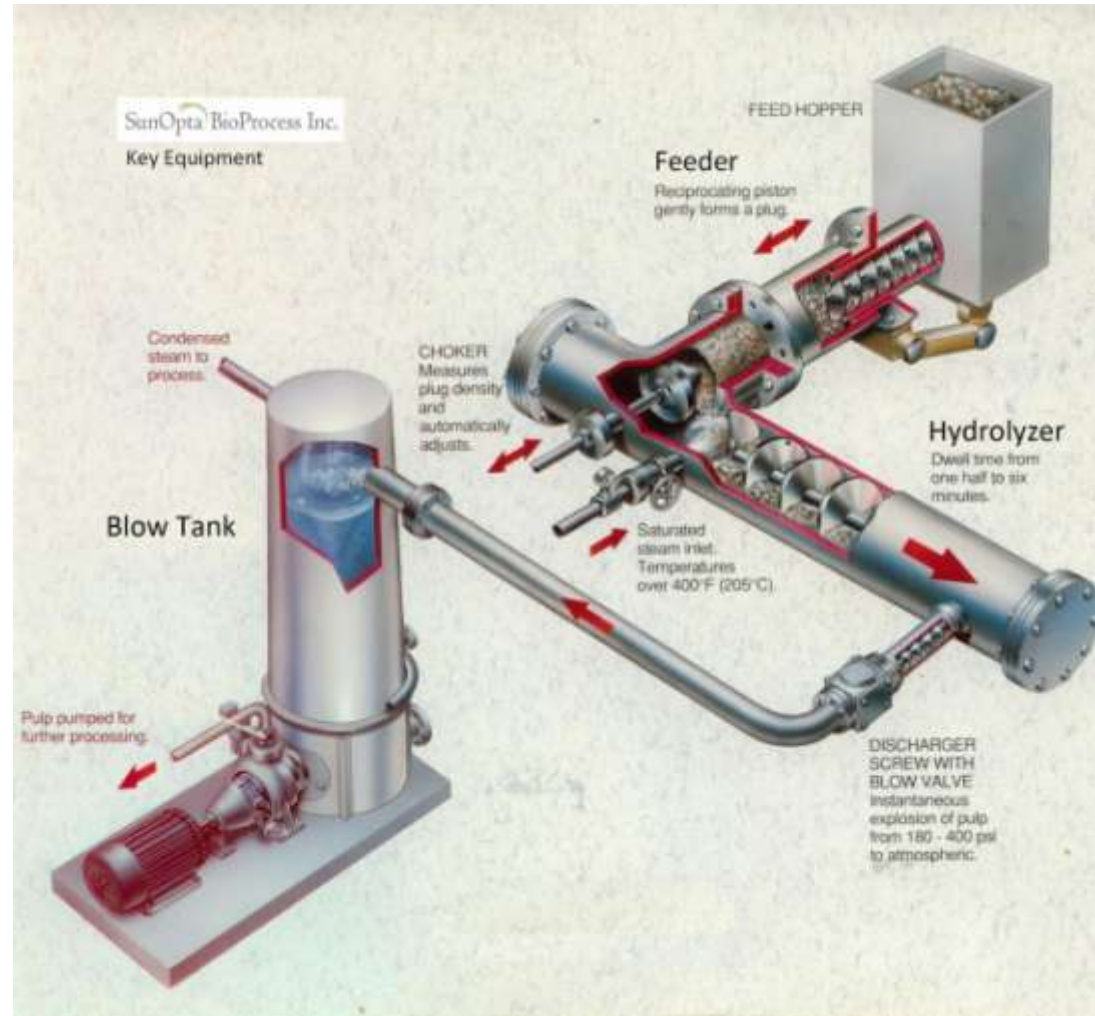


# Our Project History

- 1973 Biomass to Cattle Feed
- 1976 Entry to CE R&D
- 1978 Commercial Cattle Feed from Bagasse, Florida
- 1983 Xylitol from Oat Hulls and Birch Fines, Finland
- 1985 Cellulosic Butanol Straw/Wood Waste for Road Fuel, France
- 1987 CE R&D P&P Waste Streams, Canada
- 1990 Hydro Mulch from Orchard Wood Trimmings, California
- 1991 Published Hallmark Paper: *Fractionation of Populus Tremuloides – Cellulosic Ethanol*
- 1992 Cellulose, Hemicellulose, Lignin Fractionation, Italy
- 1993 Ammonia Pretreatment of Cellulose, Canada
- 1995 Rye Grass Straw to Liner Board, Oregon
- 1999 Dietary Fiber for Human Consumption from Oat Hulls, U.S.
- 2003 Wheat Straw to CE, Canada
- 2006 Corn Stover to CE (operational), PR of China
- 2008 Sugarcane Bagasse to Ethanol (operational), Louisiana
- 2009 Wheat Straw to CE, Spain



# Core SBI Equipment



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# Typical Industrial-Scale Projects



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# Autohydrolysis Vessel



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# Exterior View



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# Interior View



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# Integrated Plant



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# COFCO Plant, China



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# Why “Here and Now”

- **To meet EISA RFS mandates**
  - Existing feedstocks ready for harvest “here and now”
- **2010: RFS mandates 100 MM GPY of cellulosic ethanol**
  - 1.5 Million tons of fiber
- **2011: 250 MM GPY**
  - 3.8 million tons of fiber
- **Existing, large-scale, viable feedstocks are available now**
  - Corn stover
  - Cereal Straws
  - Hardwood species
  - Sugarcane bagasse
- **SunOpta process does not require any major GMO breakthrough**



# SBI's Minnesota CE Project

- SunOpta proprietary end-to-end solution
- Hardwoods: poplar, aspen, birch, and others
- Little Falls, Minnesota JV with Co-op and IPP developer
- Co-located with Central Minnesota Co-op corn ethanol plant
- Sustainable fiber supply from local sources
- 475 dry tons per day. Yield of about 84.4 gallons per dry ton
- 14 MM gallons per year, C5 and C6 sugars
- 100% sustainable energy *and* sale of wood pellets
- Project cost of about \$100 million (\$7.15 per annual gallon)
- Cash conversion cost of about \$2.00 per gallon
- Annual projected EBITDA of about \$18 million
- Unleveraged (100% equity) IRR estimated at about 8%

Difficult to find financing for demonstration plants





# Planned Commercial CE Plants

- 25 MM GPY “cookie cutter” SunOpta plants
- Estimate about \$2.00 per gallon of cash conversion costs
- Estimate about \$3.00 per gallon selling price (including RINs)
- Estimated about \$5.75 per annual gallon of capital costs
- Capital cost equivalent to about \$88,000 per daily barrel
- Estimated annual EBITDA of about \$25 million
- Estimated unleveraged IRR of about 12%
- Can be sized based on feedstock supply (50, 100 MMGPY)

Seeking strategic partners for rapid rollout of these proprietary SunOpta CE plants

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# Takeaway

- Near-term CE feedstocks must come from existing crops
- Fiber selection must be analyzed from a *process* as well as a *supply* perspective
- Project economics very dependent on C5 and C6 sugars
- Cellulosic ethanol can be price competitive with petroleum gasoline

**SunOpta, with over 30 years experience in fiber processing, offers a compelling end-to-end solution**

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