附件六

LENR 工业用热镍反应能源

INDUSTRIAL HEAT

- LENR – Low Energy Nickel Reaction 镍反应能源
- Believed to use a catalyst to neutralize the Coulomb barrier and thus creates a reaction at relatively low temperatures 反应也可在低温进行
- Cheap, abundant raw materials; small amount needed 廉价，原材料资源丰富，原材料需求量少
- Typically nickel/hydrogen-based or deuterium/palladium-based 在催化剂作用下下，通过镍和氢进行加热反应
- Required equipment is relatively small and transportable 仪器设备需求简单，可运输

Why We Are Doing It

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- A number of LENR technologies are demonstrating significant progress; one in particular may be ready for commercialization
- 镍反应堆能源零污染，无放射性物质、无放射性废物
- The world needs it 第三次工业革命的基础-
  - Energy is responsible for most global warming and air pollution, and much water pollution 能源为全球变暖，空气污染和水污染罪魁祸首
  - Energy is not available in many areas 许多地区无能源资源
  - Gathering and transporting energy destroys the environment 收集和传输能源将造成环境毁灭
  - Centralized energy plants require complex grid distribution systems, which are prohibitively expensive in many areas 需要复杂昂贵的基础设施获取并集中能源

LENR环保能源

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'There are estimates using just the performance of some of the devices under study that 1% of the nickel mined on the planet each year could produce the world's energy requirements at the order of 25% the cost of coal.' - NASA Langley Research Center Chief Scientist Dennis Bushnell on LENR

- No greenhouse gas emissions or other pollutants 无温室气体及其它污染物排放
- No radioactive material or waste 无放射性材料
- No need for coal or natural gas 无需煤炭或石油

LENR: Why It Matters
Land Use

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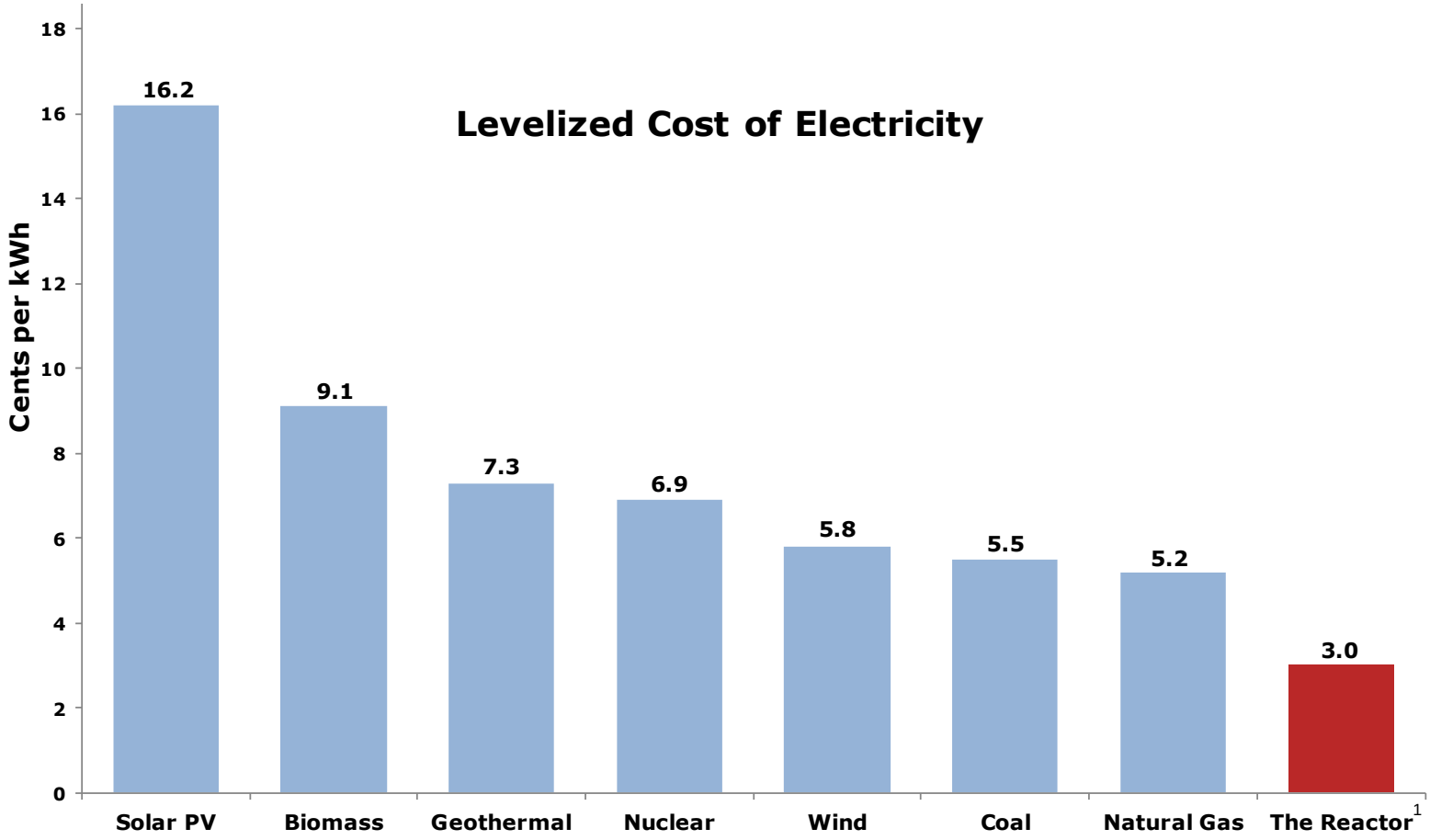
1 MW Solar PV = 5 acres

1 MW Wind = 2 acres

1 MW LENR = < 0.1 acre

LENR: 严格的成本控制



1) Conservative estimate; could be as low as 1.5 cents per kWh. See slide 12 for more information on the Reactor.

LENR: Potential Market

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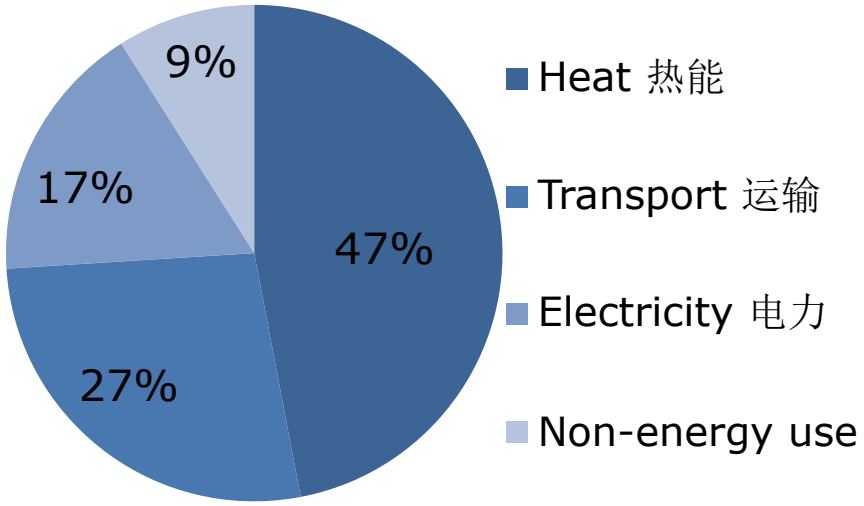
- Total world energy consumption is valued at approximately USD $4-5 trillion 世界能源消耗价值大约为4-5万亿美元
- Heat and electricity account for 64% of worldwide energy demand 热能源和电力占据所有能源消耗的64%
- LENR technology could satisfy this demand with little modification to existing plants LENR技术可在对现有设备进行最小改变的情况下满足以上对能源需求

Global Energy Consumption



Source: International Energy Agency, http://www.iea.org/topics/heat/

LENR:市场应用

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- Applications include 市场运用包括:
  - Hot water (e.g., central utilities, industrial) 热水供应
  - Steam generation for electricity and other uses (e.g., electric power, pulp and paper, food and beverage industry) 蒸汽发电
  - Process heat (e.g., general industrial, refining, metal treating, pasteurization) 工业用热
  - Building heat (e.g., commercial and industrial) 热力供应
- Well suited for developing countries 对发展中国家而言非常合适:
  - Microgrid distributed energy 简易能源传输
  - Water desalination / purification 水淡化
  - Sterilization / pasteurization of food, beverages and medicine 无菌

LENR优点

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- We believe our initial technology (“the Reactor”) has several advantages:
  该镍反应有如下优点:
  - Generates energy more consistently, on a larger scale and with lower input costs and higher energy density than other technologies 大量生产稳定能源，并保持低成本和高密度
  - Creates excess energy between 3 and 20 times the energy required to operate the device—depending on the model of reactor and operating temperatures—at temperatures between 120 and 500 degrees Celsius
    需要温度为摄氏120至500度，能产生所需消耗能源3至20倍的能量

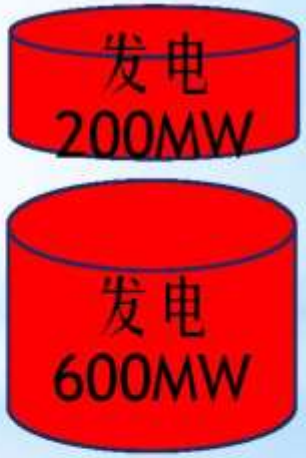
目前现状

未来展望

20尺集装箱大小

x 200 个 =

x 600 个 =



INDUSTRIAL HEAT

零污染、成本节约2/3、土地节约！

*2分钱硬币大小的镍币可产生1000辆卡车煤炭的能量

LENR市场策略

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第一期：生产反应器供应现有市场

1．煤电工厂

每1MW需要1个20呎的货柜

计划每1/4季度供应3座电厂，建造1,800个货柜

2．常规热能供应

每1/4季度将生产10,000货柜的产能

土地需求：4000亩

（含制造基地、新能源研究院、研发中心、仓储区）

第二期：生产发动机组

1．建造由1MW至3MW的移动发电机组

2．建造10MW和20MW的中型发电机组

土地需求（制造、研发、仓储）：3000亩

第一期：销售收入

每个货柜的毛利：人民币3万

目标销售5万个，毛利约 15亿

LENR优点

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THANK YOU