

Tale til international kongres om fjernvarme, 3. nov. kl. 9.30-10.00

国际供热会议的演讲稿，11月3日 9.30-10.00

Ladies and gentlemen, welcome to Copenhagen. I hope you enjoyed the reception at the Town Hall last night. I'm glad to be given the chance to open this conference. District energy and climate changes are very important issues for Copenhagen and for our climate vision. 女士们，先生们，欢迎来到哥本哈根。我希望您昨晚在大会堂度过了快乐的时光。我很高兴有这次机会召开此次会议。从全球气候的角度来看，此次哥本哈根会议对区域能源和气候变化议题的讨论是非常重要的。

District heating in Copenhagen 哥本哈根的集中供热

In 1925 the first part of the district heating system in Copenhagen was established when the first power plant, Gothersgade Elværk, started to distribute heat. From 1993 it became obligatory for all household in Copenhagen to connect to the district heating system. 97 % of all households in Copenhagen are today supplied by district heating. 在 1925 年，哥本哈根的第一座热电厂 Gothersgade Elværk 开始供热，从而拉开了哥本哈根集中供热历史的序幕。从 1993 年起，颁布了强制性措施，要求所有的哥本哈根热用户必须连接到集中供热系统。如今，已经有 97% 的哥本哈根热用户由集中供热系统进行供热。

The district heat is based on surplus heat from power plants. About one third of the district heat in Copenhagen is today produced on CO2 neutral fuel for example wood pellets and straw, as well as incineration of waste. 集中供热是利用来自电厂的余热。至今为止，哥本哈根大约有三分之一的供热量来源于二氧化碳中性燃料（低碳排放燃料），例如木屑颗粒，稻秆，以及垃圾焚烧。

The Copenhagen Climate Plan 哥本哈根气候计划

We have recently presented a climate action plan for Copenhagen. The target is to reduce the CO2 emissions from Copenhagen by 20% by 2015 - and the long-term vision is to become CO2 neutral by 2025. The largest share of CO2 emissions in Copenhagen comes from energy consumption. So, the greatest reduction will come from greening the energy supply by: 近期，我们为哥本哈根提出了一项气候行动计划。该计划的目标是，到 2015 年哥本哈根要减少 20% 的二氧化碳排放量 - 同时，确定了到 2025 年哥本哈根成为二氧化碳中性城市的长远目标。哥本哈根最大的二氧化碳排放量来自能源消耗。所以，最大的减排将来自绿色供能方案：

1. convert fossil fuels to renewables and 使用化石燃料转换成使用可再生能源，以及
2. use energy more efficiently 更加高效地使用能源

In the Climate Action Plan we have pointed out different initiatives to reach the 20% reduction by 2015. The initiatives are 在气候行动计划中，我们提出了几种不同的措施，以达到 2015 年减少 20% 的目标。这些举措包括

- more biomass in the Combined Heat and Power plants 在热电联产电厂中更多使用生物质
- wind turbines – both onshore and offshore 风力发电-包括陆上风电和海上风电
- geothermal heating 地热采暖
- improved energy efficiency in the network and the power plants 在管网和热电厂中提高能源使用效率

Greening the energy supply is economically beneficial. Investments are recovered, often quickly. Many of the initiatives will reduce energy costs for households, businesses and the Municipality itself. 从经济角度分析，绿色供能方案是可以获利的。投资往往可以快速回收。很多种措施都会降低家庭、企业和市政当局本身的能源成本。

Converting the energy production to renewable fuels requires cooperation with the energy producing companies. We don't, in the Municipality, own the power plants and we have no direct influence on the choice of fuel. A binding partnership is therefore essential to succeed. 在发电行业更多使用可再生燃料的举措需要与电力公司进行合作。市政当局没有自己的发电厂，也就是不能对选取燃料的种类产生直接影响。因此，具有约束力的合作关系是成功的关键所在。

In the Climate Action Plan we also have some initiatives concerning energy savings. We want to lead the way and reduce energy consumption in our own buildings - for example by implementing all energy saving projects with a pay back time of less than 10 years. 在气候行动计划中，我们也提出一些关于节能方面的措施。我们要起到示范作用，必须首先降低我们自己的建筑物的能耗 - 例如通过落实各项节能项目和措施，使资本回收期在 10 年内完成。

Other CO2 reducing projects 其他的二氧化碳减排项目

Besides the initiatives in the Climate Plan we have other CO2 reducing projects that are worth mentioning. 除了气候规划中的措施，我们还有其他值得尝试的项目减少二氧化碳排放。

Today a part of the district heat in Copenhagen is based on steam which is more inefficient and energy consuming than water based heating. That's why we in Copenhagen have decided to convert the steam to water based district heating by 2025. 当今，哥本哈根集中供热系统中还有一部分基于高温蒸汽供热，但是这种方式与热水供热的方式相比，效率很低而且能耗较大。这就是为什么哥本哈根决定到 2025 年，要将蒸汽系统改造成热水系统进行集中供热。

Another project is a small solar energy plant. We do not have solar energy in Copenhagen today because the waste incineration plants produce enough energy to cover the needs in the summer. But in order to obtain a sustainable energy supply in the future, solar energy can be an important and cheap solution. The purpose with the new solar heating plant will therefore in the first instance be to obtain knowledge about solar heating and the interaction with the district heat system. 另外一个项目是小型太阳能能源厂。当今，哥本哈根没有使用太阳能，其原因是因为垃圾焚烧厂可以产出足够的能量满足客户的需求。但是，为了在未来获取可持续的能源供应，太阳能的作用是十分重要的，而且使用太阳能是很便宜的解决方案。因此首先要新建太阳能供热厂，以获取与太阳能供热并在集中供热系统中应用的相关知识。

In the summer we sometimes have surplus heat from the waste incineration plants. Instead of discharging the heat into Øresund we can use the extra heat for cooling. Our first cooling project has started in central Copenhagen, at Kgs. Nytorv Square. The plant supplies for example the neighboring banks, department stores and hotels with district cooling. One of the study tours tomorrow will go there if you are interested in more facts about the project. 在夏季垃圾焚烧厂会产生余热。我们可以将这部分余热用于制冷用途，而不再将这些余热排入厄勒海峡（Øresund）。在哥本哈根市中心的 Kgs. Nytorv 广场，我们已经开始了第一个区域供冷项目。该制冷机组可以向周边银行、百货公司和酒店进行区域供冷。明天的学习考察的地点之一就是要到该项目的现场，如果您有兴趣的话可以参加，了解到该项目的更多信息。

CO2 neutral by 2025 2025 年实现二氧化碳中性目标

To fulfill our vision to become CO2 neutral we need to increase our CO2 neutral energy supplies. And the increase in electricity from wind turbines requires a more flexible energy system. We will have to use even more biomass and solar energy, and we must use other technologies such as heat storage and heat pumps. 为了实现二氧化碳中性的目标，我们需要增加二氧化碳中性能源的供给。同时，在发电系统中增加风力发电的比重，这需要更加灵活的能源系统提供支持。我们也会更多地使用生物质能和太阳能，同时，我们也必须使用其他技术，例如储热罐和热泵技术等等。

But Copenhagen will not be the only city asking for more biomass in the energy production. The demand for biomass is increasing in Europe. And this will continue as all countries must meet their goals of CO2 reduction. It is therefore important that the production of biomass is sustainable. Otherwise we can create new problems trying to solve the problems at hand. 但是，哥本哈根不会是在产能方面更多地使用生物质能的唯一的城市。生物质能的需求在欧洲不断地增加。由于所有国家都必须达到各自的二氧化碳减排

目标，这种趋势还将会持续下去。所以，生物质能的产量需要可持续性，这点是非常重要的。否则，我们会在尝试解决手边问题的同时会产生其他各种新的问题。

Another problem concerning the increasing demand for biomass is that the price may go up. Today it is profitable to convert to biomass in Denmark but if the price goes up the energy producers will turn to coal and gas again. The importance of energy savings and other technologies as solar and geothermal energy is therefore paramount. 另外一个需要关注的问题是生物质的需求增加会导致其价格上涨。当今，丹麦电厂转换使用生物质燃料是因为其有利可图，但是如果价格上涨的话，能源生产方会再次转回使用煤和天然气燃料。因此，节约能源并使用太阳能和地热能等其他技术的重要性是无可置疑的。

Summing up 总结

The worlds cities are responsible for up to 75 percent of the world's CO2 emissions. Not many cities in the world have district heating and as we all in this room know district heating is one of the most efficient ways to reduce CO2 emissions. 世界各地的大中型城市需要对产生占全球总量的 75%的二氧化碳排放量负起责任。全球使用集中供热的城市并不是很多，就像在座的各位所知的那样，集中供热是减少二氧化碳排放量最有效的方法之一。

At the COP15 the City of Copenhagen have invited mayors from all over the world to participate in The Copenhagen Climate Summit for Mayors. The summit will put cities on top of the global climate agenda. Any solution to the climate crisis therefore, has to involve active participation from the cities. I hope the summit will send a strong signal to the heads of state that the cities are part of the problem as well as part of the solution. 在《联合国气候变化公框架公约》第十五次缔约方会议中，哥本哈根邀请了来自全球各地的市长参加此次哥本哈根气候峰会。本届会议将世界各个城市列入到全球气候的议程里。因此，希望各个城市积极参与到解决此次气候危机的任何一种方案中。我希望此次会议会给各国首脑一个强烈的信号，就是所有城市都与此问题有关，并且应该参与其中。

Welcome again to Copenhagen and I hope you will have a good conference and a pleasant stay in Copenhagen. 再次欢迎来到哥本哈根，我希望您在此会议中度过了美好的时光，而且希望您在哥本哈根期间过得愉快。