METKA: Profitable Energy from the Forest

– creating an operational model based on the research results

Case example

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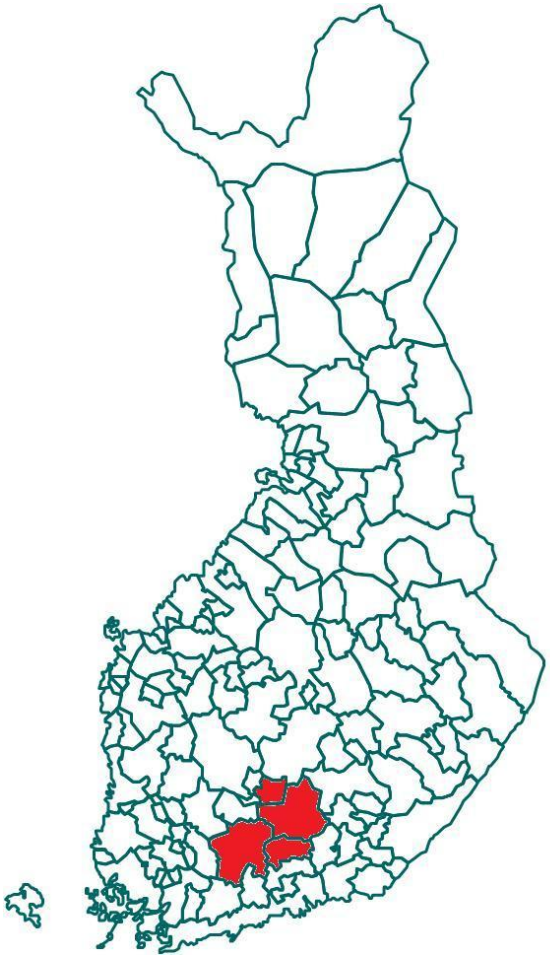
Metsänomistajat
ETELÄ-SUOMI

Project area and operators

- **In 2007, compared to other regions in Finland, Tavastia region was leaving behind in forest energy utilization**

- METKA aimed at increasing the cost efficiency of the forest energy chain and the volume of the supply chain in **Häme region** (red area)
- Coordinated by Forest Management Association (FMA) Kanta-Häme
- Project partners FMA Päijät-Häme, TTS Research and the Finnish Forest Research Institute (Metla)
- Part of the Rural Development Programme for Mainland Finland 2007-2013 , funded partly by the European Agricultural Fund for Rural Development (EAFRD).



Objective of the Metka (2008-2012) project

- **Creation of an operational forest energy model** from zero point
- **The improvement of the profitability and quality of forest energy**
- Achieving the most cost-effective and productive way to harvest forest energy from heterogeneous stands
- Increase the **efficiency** of the energy chain from the roadside to the end user

The long way from the forest to the heating plant

Building the partnership

- Local forest management association had good connections
- Urgent need, the results were taken into practice immediately
- Common interest, perfect timing

Roles

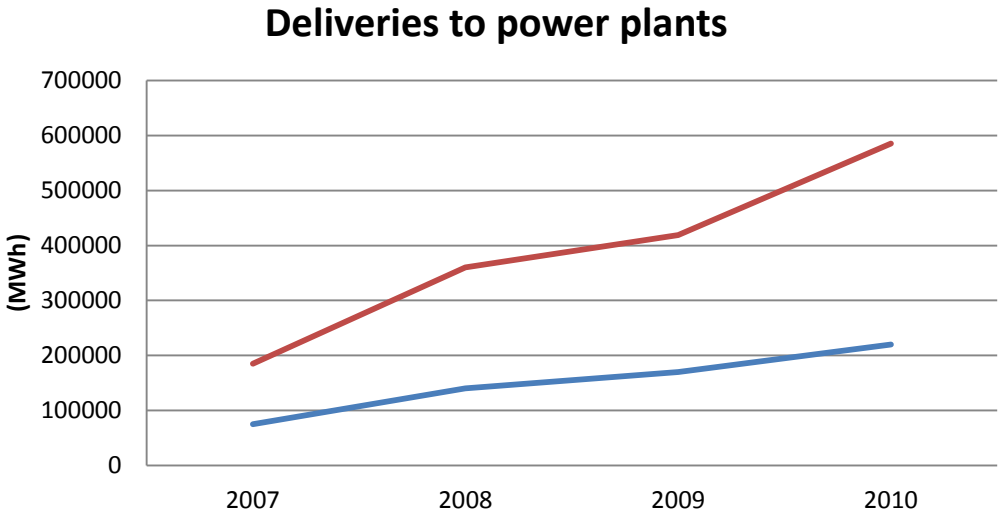
- Forest Management Association
  - Project management
  - Field work arrangements (dozens of field test days)
  - Coordinating tasks
  - Information to forest owners

- FUNDING (1 million €)
  - EU and state 53,16 %
  - Municipalities 25,34 %
  - Private funding 21,50 %

- TTS Research
  - studies focusing on forest energy harvesting and processing.
    - especially small-diameter energy wood harvesting.
  - Focus on use of time
  - forms the basis for cost and profit analyses
- Metla, Finnish forest research institute
  - development of a forest energy storages' moisture estimation algorithm
  - forest energy harvesting yield calculation program.

Results in numbers

- 11 officials, 78 entrepreneurs and 39 loggers working in energy wood harvesting, planning and logistics



Results in practice

- Co-operation, networks, shared information
- Stump harvesting technology and logistics
- More efficient use of chipper and hogging equipment
- Improvement of energy wood forwarding and storage
  - FMA Kanta-Häme & FMA Päijät-Häme have developed an energy wood storage handling system
- Improvement of energy wood measurement
  - a forest energy felling yield prediction application
  - The estimation models of stumps in cubic metres and branch and crown mass
- Timber and energy wood harvesting interfaces
  - The test results show that integrated timber and energy wood harvesting is the most cost-efficient harvesting method.
- All the results are public

Challenges

- Bureaucracy
  - For practice orientated foresters, following the project terms can be difficult
- Communication!
    - Results also for practical operators
    - Feedback
- Partner involvement and commitment
- Financial management
  - of a large-scale project with multiple partners is demanding

- Results into practice
    - At the end of 2010 started a METKA – education project, managed by TTS
    - Educating the foresters, converting the study results into operation

Thank you for your attention!

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