Operating models of forest energy suppliers for small and medium sized heat/energy producers

Forestry Contractor
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The story

Photos: Arto Rummukainen
Plan for the project

- Consumer
- Power plant
- Fuel supplier
- Long distance transport
- Chipping/crushing
- Harvesting
- Forest owner

1. **Power plant**
   - Survey
   - Customers
   - Focal firm
   - Suppliers

2. **Fuel supplier**
   - Survey
   - Customers
   - Focal firm
   - Suppliers

3. **Contractor survey?**
   - Customers
   - Focal firm
   - Suppliers

- Forest owners

Suppliers and customers are connected to the focal firm, and each section is analyzed through surveys to understand their specific needs and roles within the project.
Power plant survey

Photos: Arto Rummukainen
Size distribution of power plants by usage of forest biomass

% Power plants (n=95)

- Small (<30000 MWh)
- Medium (30000-120000 MWh)
- Large (>120000 MWh)
Fuel portfolio for power plants
Average fuel portfolio by size
Fuel procurement methods

- Small
- Medium
- Large

- 1 mode
- 2 mode
- Multiple modes
- Main and supporting modes
Co-operation and operations

![Share of responses chart]

- **Very satisfied**
- **Satisfied**
- **Moderately satisfied**
- **Large flaws and we are very frustrated**
- **There are many flaws and we are dissatisfied**

**Power plant (n=86)**

- Very satisfied: 0%
- Satisfied: 20%
- Moderately satisfied: 40%
- Large flaws and very frustrated: 80%

**Fuel supplier (n=18)**

- Very satisfied: 100%
- Satisfied: 0%
- Moderately satisfied: 0%
- Large flaws and very frustrated: 0%
Fuel supplier survey

Photos: Arto Rummukainen
Forest energy fuel suppliers’ turnover in survey

% Companies

Turnover (€)

Cumulative percentage

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

under 500 000 500 000 - 1 mil. 1-2 mil. over 2 mil.

0% 5% 10% 15% 20% 25% 30% 35% 40% 45%

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How the turnover of wood energy is split between tasks
Supply of wood energy
How the tasks are divided and share of contracted work

Number of firms

- Contractor does everything
- Firm’s share less than 50%
- Firm’s share over 50%
- Firm does everything

Tasks: Stand purchasing and planning, Harvesting, Stump extraction, Purchase from roadside, Chipping/crushing at roadside, Long distance transport of stumps, harvesting, Terminal storage, Chipping/crushing at terminal, Storage at the power plant, Chipping/crushing at the power plant, Feeding fuel to combustion.
## Competitive advantage based on generic strategies

### Competitive advantage

<table>
<thead>
<tr>
<th>Competitive scope</th>
<th>Low cost</th>
<th>Differentation</th>
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</table>
| Broad target      | Cost leadership (1)  
• continuous cost control | Differentiation (6)  
• quality  
• reliability of delivery |
| Narrow target     | Cost focus (1)  
• locality  
• low cost structure | Differentiation focus (7)  
• locality  
• agility  
• reliability of delivery  
• customer focus  
• trustworthiness |
How treasure is divided
Where value added is made
Summary – no single solution to capture added value

Fuel supplier
- Controls the supply of fuel
- Does not do any task self
- Use contractors for task

Power plant
- Harvesting
- Chipping
- Long distance transport
- Feeding fuel to combustion

Customers

Fuel supplier
- Purchasing and planning stands

Power plant
- Stand purchasing and planning
- Harvesting
- Chipping
- Long distance transport
- Feeding fuel to combustion

Customers

Long distance transport Chipping Harvesting