Characterising green employment: The impacts of ‘greening’ on workforce composition

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Outline

O*NET: Defining green jobs

What does the green economy look like now?

How can we get there?

What could the green economy look like?
O*NET Database

• US Department of Labour
• Cross-sectional database
• Occupation-level information on tasks and skills
• ‘Green’ jobs and ‘green’ tasks
• ‘Similar’ jobs
O*NET’s job categorisation

- Green
  - Increased Demand
  - Enhanced Skills
  - New & Emerging
- Non-Green
  - Green Rival
  - Other

Green = Any occupation affected by green economic activity, not restricted to industry or product/service provided
‘Green’ = continuum, not binary

<table>
<thead>
<tr>
<th></th>
<th>Green Rival</th>
<th>Other</th>
<th>Green Rival</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>44.3%</td>
<td>36.3%</td>
<td>1.2%</td>
<td>9.1%</td>
<td>9.1%</td>
</tr>
<tr>
<td>ID</td>
<td>ES</td>
<td>NE</td>
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Potential for short-term greening
Indirectly green; Supportive role

Some tasks are unique to green jobs...
But green and non-green jobs share a significant proportion of tasks
Potential short-run job transitions
Managing job transitions

‘Skill distance’ between occupations = average difference (in absolute terms) between the importance (on a scale of 1-5) of 6 broad task categories

E.g. Skill distance of 1/6 (0.17) = task categories between occupations differ in importance by 1, on average

<table>
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<tr>
<th>Transition</th>
<th>Green ID</th>
<th>Green ES</th>
<th>Green NE</th>
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<tbody>
<tr>
<td>Green Rival to Green</td>
<td>0.076</td>
<td>0.077</td>
<td>0.064</td>
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<tr>
<td>Green to Green</td>
<td>0.074</td>
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Important role of on-the-job training
Conclusion

- Large % of workers will be affected by greening
- Green Rival vs. Green – Differences relatively small
- Re-training can mostly happen on-the-job

Green economy has large potential for short-run growth, if job transitions are strategically managed.
Example: A transport company

Green Rival: Retail salesperson

Green ES: Truck driver

Green ID: Customer service representative

Green NE: Transportation planner

Source: presentermedia.com
O*NET’s two lists to measure `similarity`

- **Job-specific criteria**: knowledge; skills; work activities; work context; Job-zone (a weighted measure of the level of education and experience required)

- **Worker-specific criteria**: abilities; interests; work styles; work values