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Distributed Generation and Renewables Outlook to 2030

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Global Prospects

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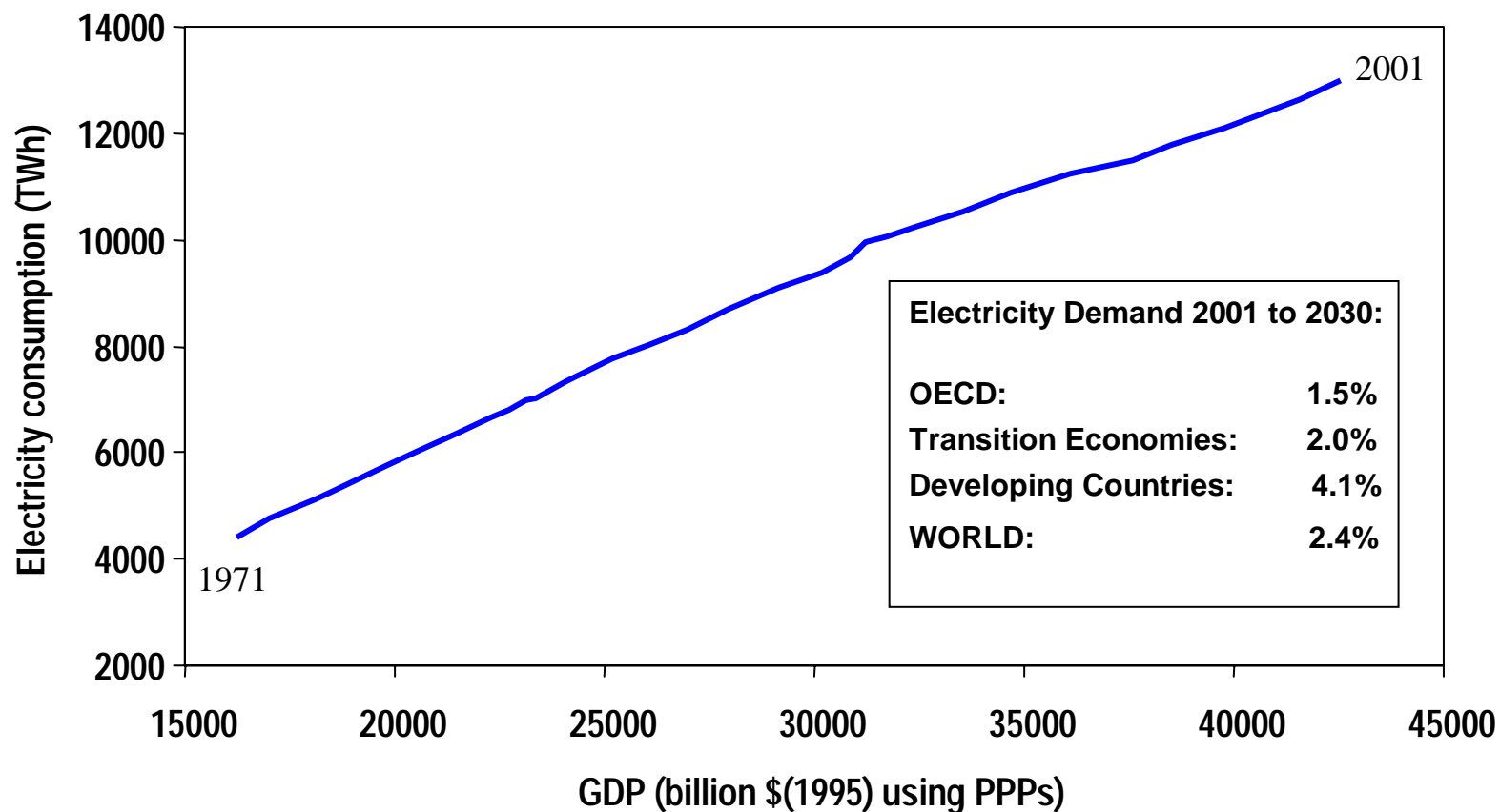
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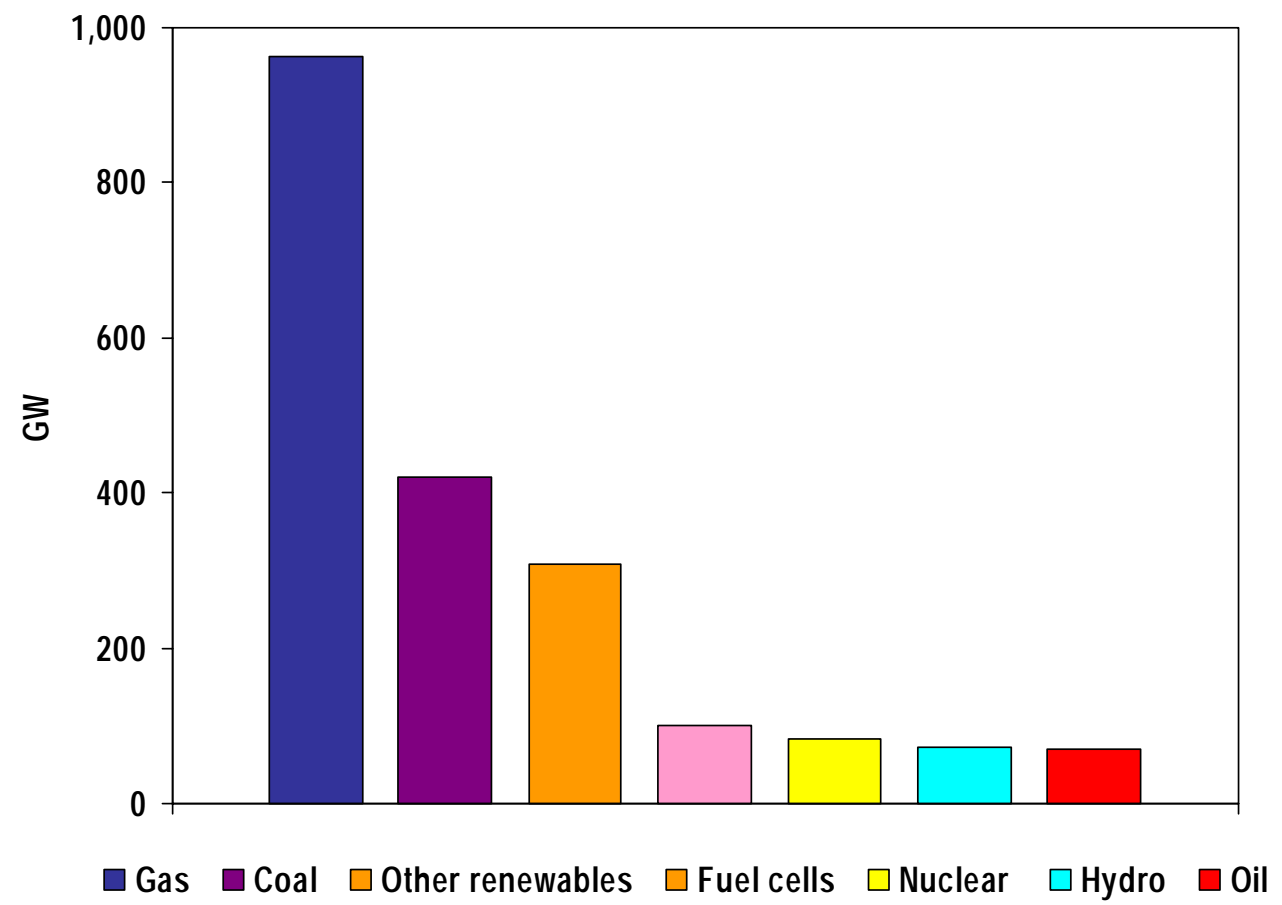
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World Electricity Consumption vs. GDP 1971-2001

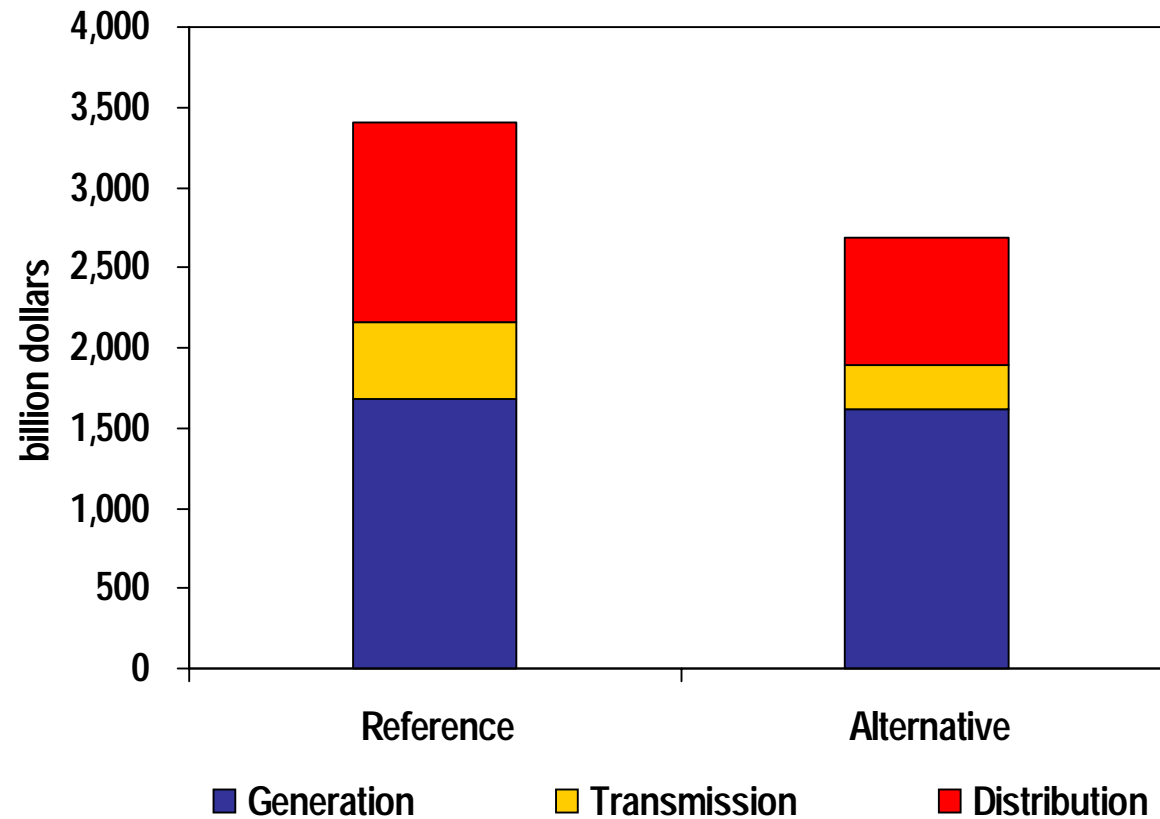


World electricity demand is set to increase rapidly

OECD Capacity Additions by Fuel, 2001-2030

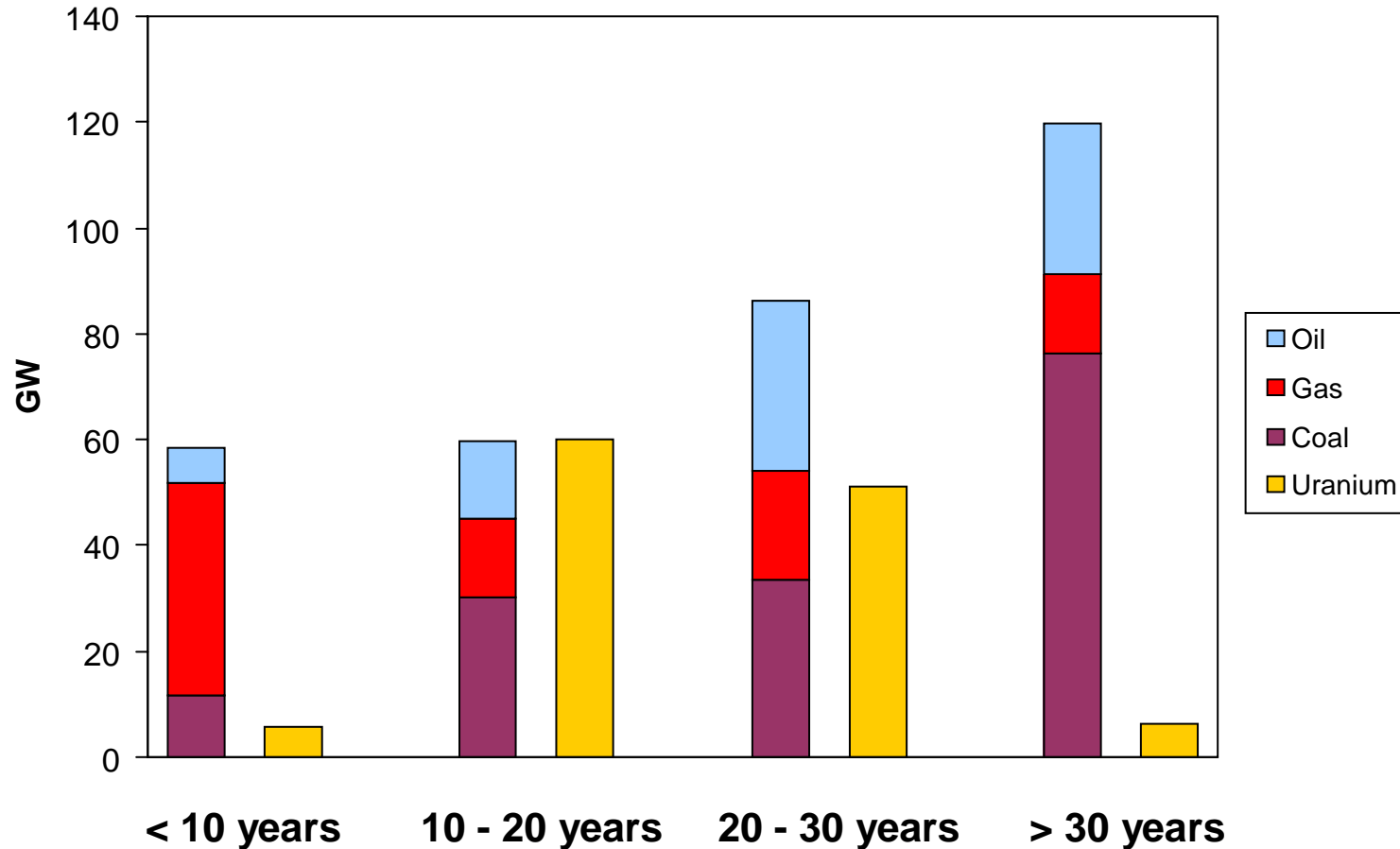


OECD Investment in Alternative and Reference Scenarios



Transmission and distribution investments are much lower in Alternative Scenario, but generation investment hardly falls...

Age of Installed Capacity in EU-15



Europe's power plants are ageing: half current capacity - mostly coal-fired - could be retired before 2030

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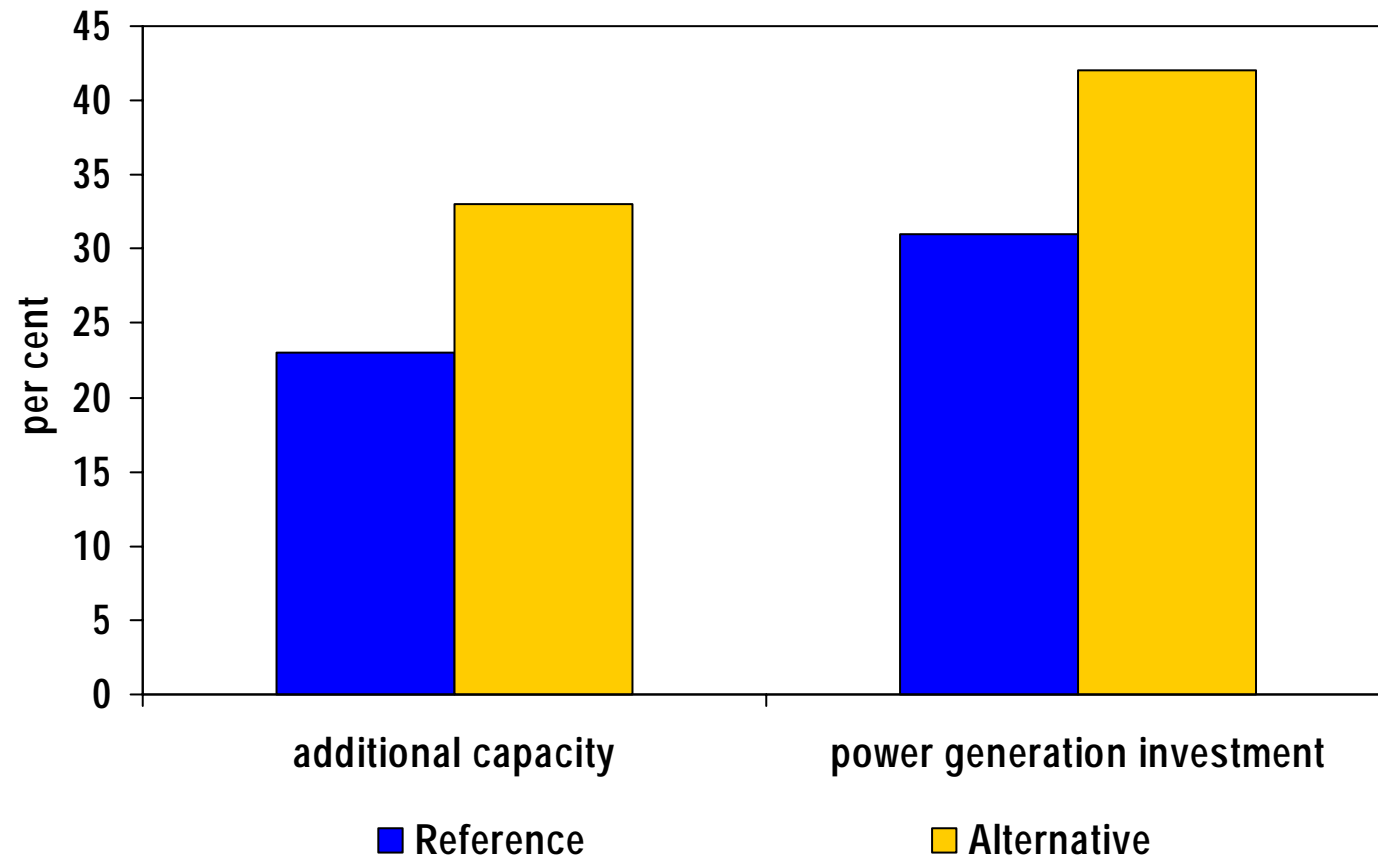
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Distributed Generation

Distributed Generation in WEO

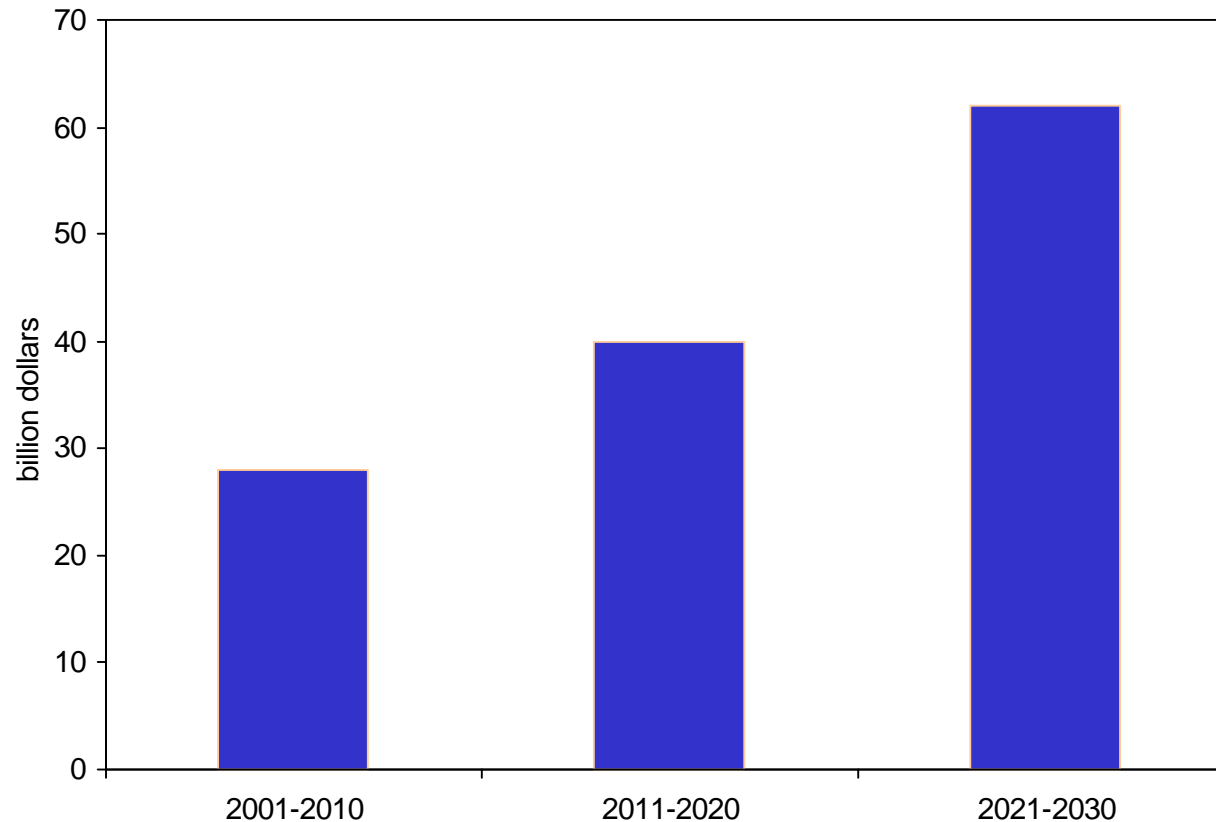
- DG in WEO: small plant close to demand center
- Reasons for DG:
 - incentives for CHP and renewables (OECD),
 - demand for high reliability (OECD)
 - unreliable electricity supply (dev. countries)
 - rural electrification (dev countries)
 - high grid electricity prices (e.g, Japan, dev. countries)
- WEO 2002 projects a rising share of DG in all regions
- Share is even higher in OECD Alternative Policy Scenario

Distributed Generation in OECD Reference and Alternative Scenarios



Additional policies in the Alternative Scenario encourage further use of DG

Savings in Transmission Investment from the Growth in Distributed Generation



DG reduces investment in transmission by \$ 130 billion in the period 2001-2030 (8% of total investment in transmission networks worldwide)

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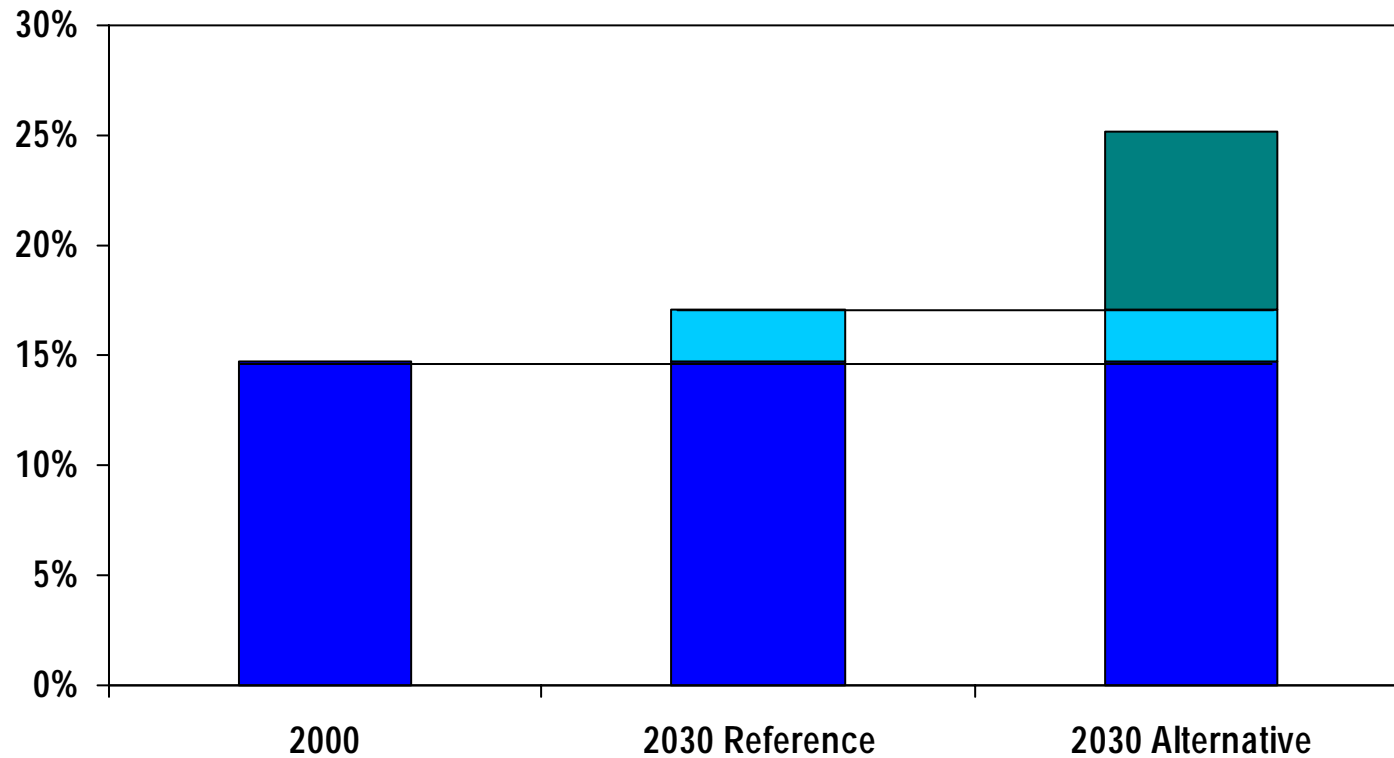
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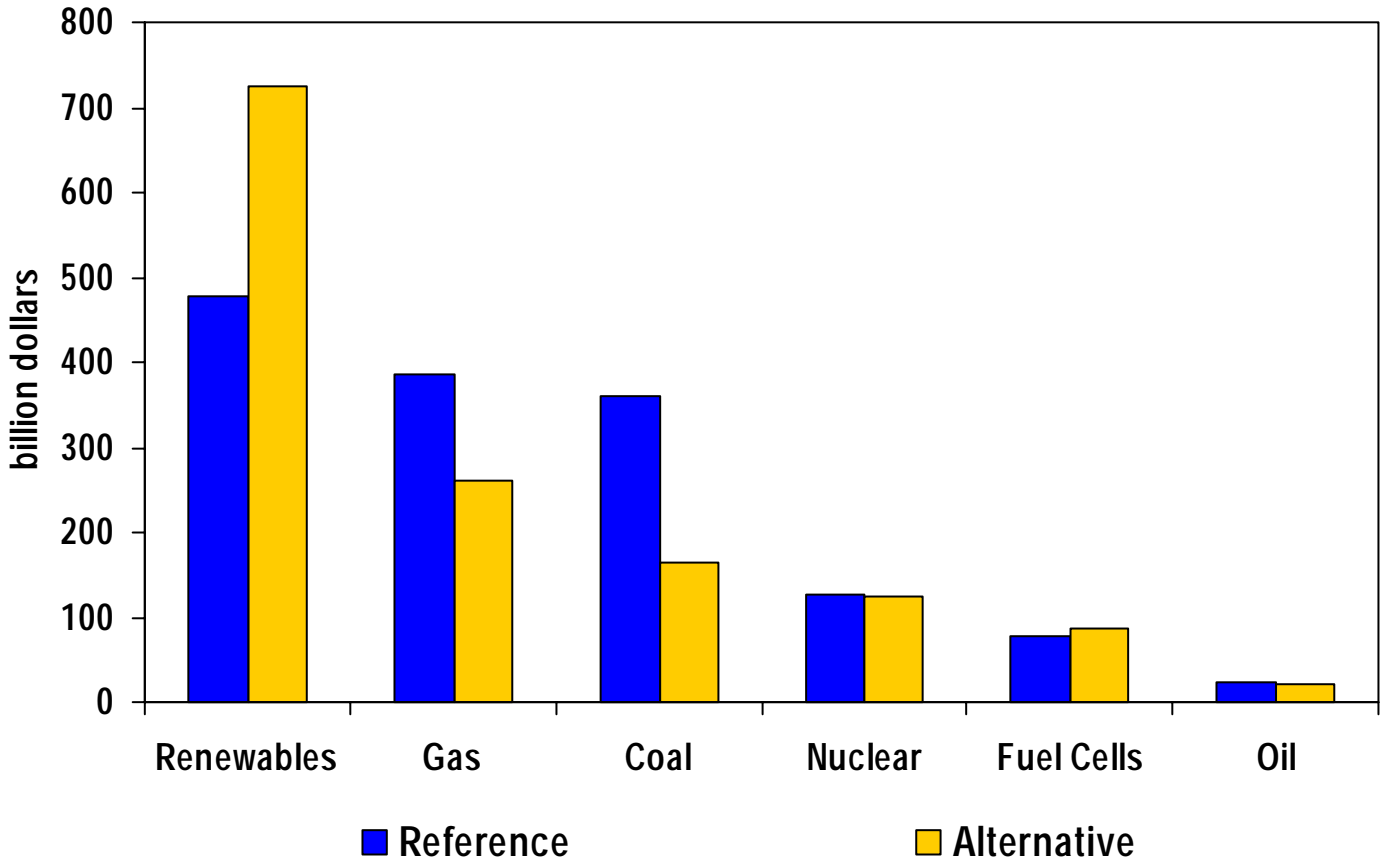
Renewables

OECD Renewable Share in Power Generation Alternative and Reference Scenarios

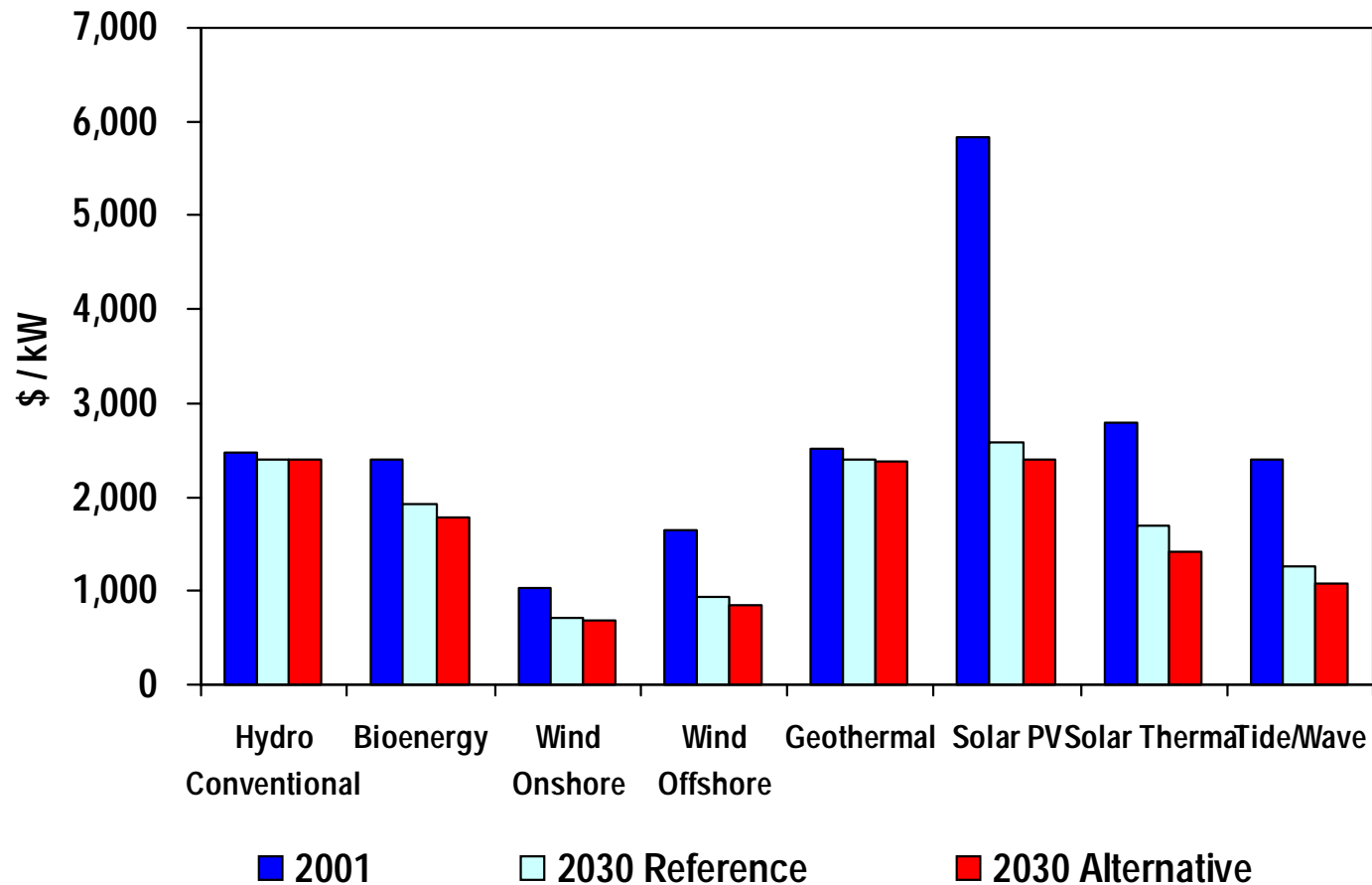


A fourth of electricity generation could come from renewables by 2030

OECD Power Generation Investment by Source



Capital Costs of Renewable Power Generation Technologies



The capital costs of most renewable technologies will fall in the future depending on the rate of deployment

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Key Issues

- **Current trends suggest rising trend for DG but:**
- **Strong and sustained government strategies needed to achieve the substantial increase in the Alternative Policy Scenario**
- **Potential to improve costs is very large and depends on rate of deployment - International efforts needed to bring costs down**
- **WEO 2004: World Alternative Policy Scenario – will examine potential for DG and renewables in developing countries**