

CONCLUSIONS AND ADDITIONAL ISSUES

Better understanding of technological options, economic ramifications, and policy impact enhance the likelihood that Poland can move quickly towards a low emissions growth path. Such a transition will deliver additional benefits, including added energy security from increased energy efficiency and use of renewable energy sources, human health benefits from transport and other improvements that reduce local air pollutants, and strategic and competitive advantages that are more likely to accrue to countries that pursue low emissions development early. While this report provides some complex assessments and new analytic tools for policymakers, its analysis, rather than exhausting the central issues related to a transition to low-emissions growth, has identified a number of additional economic issues for further work.

One area for further research is follow-on development of the economywide and engineering models and the links between them. Having developed a suite of models with some new methods of integrating bottom-up with top-down, a direction for further work would be additional integration and harmonization of the models. In particular, remaining differences in the business-as-usual projections, the approach to modeling the power sector, and transport sector treatment could be resolved, albeit not easily. Alternatively, and perhaps more fruitfully, these models can be transferred to government or local ownership to serve as tools for policymakers going forward. Further, the preservation of alternative models, which produce differing results, highlights continually for model users the criticality of model assumptions and simplifications.

Supplementary analysis using the existing economy-wide models or off-the-shelf models suited to the topic might fruitfully be applied to a number of issues. Extending the time horizon to 2050 would allow a more balanced treatment of the impact of long-gestation mitigation opportunities such as nuclear power plants in the MEMO model. The inclusion of R&D expenditures and technological progress would allow improved analysis of the long-term gains in the economy from implementation of energy efficiency measures. Distributional and regional impacts would be of interest and could be approached simply using existing household survey data.

Sectoral and bottom-up or engineering analysis could also be usefully supplemented. More detailed bottom-up analysis of energy efficiency options in Poland would help clarify the nature of implementation barriers and assign costs to them. This richer database could then be linked to the MEMO model to assess the macroeconomic impacts of a coordinated and significant program of energy efficiency. Sector studies of agriculture, land use, and forestry would assist in moving from the financial costing of the MicroMAC curve to understanding how to implement abatement measures in these sectors in Poland.

The complexity of EU policy leaves many questions and regulatory aspects still to be analyzed. Public subsidies warrant further attention, since existing distortions and overlapping regulations mean that the impact of an additional tax or subsidy is hard to predict. In particular, a better understanding is needed of the system of 'white certificates' which are intended to encourage investment in energy efficiency measures. The macroeconomic and fiscal implications of derogations (or free allowances) in the ETS system, of various recycling options of revenues from ETS auctions, of the possible introduction of carbon taxation in non-ETS sectors, and the proposal to re-introduce an excise tax on coal from 2012 also merit analysis. Lastly, better modeling of renewable energy sources and their complex EU regulations would better inform decisions on power sector investments.

One last area that this report did not investigate was how to foster the new business opportunities that may arise for those countries that move earlier to a low-emissions economy. For all the same reasons that Poland has thrived following its transition to a market economy and its accession to the EU—high levels of education, conservative macroeconomic management, respect for the rule of law, middling infrastructure, and proximity to Europe—it might be expected that in the transition to a low-emissions economy, Poland would find a way to maximize the benefits and minimize losses.

This report provides a detailed assessment of many aspects of a low emissions growth strategy for Poland, developing insights via a suite of models that should provide ongoing assistance to policymakers in Poland. Policymakers may find reassuring the report's main message that Poland's transition to a low-emissions economy, while not free or simple, is affordable. However, capturing the full package of technologically feasible and economically sensible abatement measures requires coordinated and early action by the government. With an ambitious approach, Poland can aim to reduce its GHG emissions by about one-third by 2030 (relative to 1990) with little cost to incomes and employment. Similarly, meeting the EU targets for 2020 appear generally feasible for Poland at modest cost, albeit likely more challenging for less energy-intensive sectors such as transport than for sectors that can access the efficiencies of EU-wide carbon trading. Poland has already weathered one economic transition and emerged with a strong and flexible economy. This next transition—to a low emissions growth path—while requiring an evolution in lifestyles and priorities over the next 20 years, may well turn out to be much easier.