

CHAPTER TWO

Approach to Assessing Emissions, Costs, and Benefits

Table 2.4 Transformation costs and benefits by sector

Sector	Technical Costs and Benefits	Non-Technical Costs and benefits
Agriculture, forests, and other land use	<ul style="list-style-type: none"> • Investment cost of transformations • Value of agricultural inputs, such as fuel and fertilizer • Value of agricultural outputs (crops and livestock produced) • Technical cost of reforestation 	<ul style="list-style-type: none"> • Nitrate leaching and runoff from fertilizer • Soil health benefits of conservation agriculture • Ecosystem services of forests • Human health and productivity of better diets • Household grocery costs from improved
Industry	<ul style="list-style-type: none"> • Investment cost of transformations • Maintenance savings of transformations, e.g., from lower maintenance of heat pumps • Value of industrial inputs, such as fuel • Value of industrial outputs 	<ul style="list-style-type: none"> • Air quality changes from industrial energy and production
Buildings	<ul style="list-style-type: none"> • Investment cost of transformations • Maintenance savings of transformations, e.g., from lower maintenance of heat pumps • Value of building inputs, such as fuel 	<ul style="list-style-type: none"> • We did not assess non-technical benefits and costs in buildings such as indoor air
Transport	<ul style="list-style-type: none"> • Investment cost of transformations • System cost of transportation service provisioning • Maintenance savings, e.g., from lower maintenance of electric vehicles • Value of transport inputs, such as fuel 	<ul style="list-style-type: none"> • Health impacts of changing air quality • Health and productivity impacts of avoided crashes • Productivity impacts from congestion
Energy production	<ul style="list-style-type: none"> • Capital and operating expenditures of electricity production • Cost of fuels used to produce electricity and other fuel production • Investment cost of other transformations 	<ul style="list-style-type: none"> • Health benefit of avoided air pollution
Waste	<ul style="list-style-type: none"> • Technical costs of transformations • Value of energy recovery 	<ul style="list-style-type: none"> • Health impacts of universal safe sanitation • Health and environmental impacts of ending open dumping • Water quality impacts of wastewater treatment