



Economic Impact of Completing the Appalachian Development Highway System

Completion of the Appalachian Development Highway System (ADHS) would yield significant economic benefits for both the Appalachian Region and the nation, according to a study prepared for the Appalachian Regional Commission (ARC). By facilitating national freight flows, reducing travel times, improving safety, and enhancing access to markets, completion of the ADHS would create new jobs and greater value-added activity, returning \$3 in economic benefits to the nation for every \$1 spent to complete the system.

The first highway system authorized by Congress for the purpose of stimulating economic development, the ADHS is a 3,090-mile highway system composed of 31 corridors located in the 13 Appalachian states. The ADHS is approximately 85 percent finished and when completed it will link into an integrated network connecting to national markets and trade flows.

The study—conducted jointly by Cambridge Systematics, Economic Development Research Group and HDR Decision Economics—assesses how the corridor improvements will enhance the connectivity of the Appalachian people and businesses to other highway facilities, multimodal transportation, and markets (specifically labor markets, buyers and suppliers, trade, and tourism).

Key findings from the study include the following:

Direct Economic Benefits

- The Appalachian Region will gain an estimated **\$2.1 billion annually in value-added activity** by 2035 due to induced economic development from market accessibility gains associated with the ADHS.
 - Completing the ADHS will result in improved market accessibility for large segments of the Appalachian Region.
 - Two hundred thirty-five out of the 410 ARC counties are expected to see reductions in travel time to the nearest commercial airport, and 325 out of the 410 counties are expected to increase their accessibility to buyer and supplier markets within a 3-hour drive.

Total Regional Economic Impacts

- Reduced business-related travel time and costs made possible by market accessibility gains will directly and indirectly increase regional output and employment in the Appalachian economy. These regional impacts will gradually increase over time and by 2035 will generate an estimated **80,500 jobs and \$3.2 billion annually in increased wages** for the Region's workers, as well as a total of \$5.0 billion per year in increased value-added.

Travel Efficiency Benefits

- Completing the ADHS will result in significant travel benefits, including lower travel times and costs for businesses and individuals both inside and outside of Appalachia. Nationally, total user benefits (savings in travel time, fuel and non-fuel operating costs, and increased safety) are estimated to be \$1.6 billion annually by the year 2020—the hypothesized year of system completion—and to grow to \$5.1 billion annually by 2035, under a medium-growth scenario.
 - Completing the ADHS has national significance: it will facilitate the movement of freight into, out of, and through the Region. More than 65 percent of the benefits of freight flows will accrue to areas outside the Appalachian Region.

- Over 90 percent of auto and non-freight truck benefits are estimated to accrue to the Appalachian Region based on origin and destination trip patterns.
- Completing the ADHS will result in a significant reduction in travel time for business and personal trips, as well as for long-distance freight trips. By 2020, the aggregate savings in travel time are estimated to be over 84 million hours annually, growing to almost 212 million hours by 2035.

Benefit-Cost Analyses of Travel Efficiency and Economic Growth Impacts

- Two benefit-cost analyses were examined in the study: one on travel efficiency for the Region and the nation, and one on economic growth impacts for the Region and the nation. While costs were the same in each, the benefits varied:
 - *Travel efficiency benefits*, while significant for the Region, were higher for the nation, reflecting the dominance of national freight efficiency gains;
 - *Economic growth impacts*, resulting from increased market access, were greater for the Region than for the nation, reflecting the attainment of the strategic development goal of the ADHS.
- The estimated travel efficiency benefit-cost ratio of completing the ADHS, using a 5 percent discount rate for the medium-growth scenario and conservative, high-cost projections, was 1.9 for the Appalachian Region and 2.9 for the nation as a whole. The estimated economic growth impacts benefit-cost ratio, using the same scenario and assumptions, was 3.6 for the Appalachian Region and 3.1 for the nation as a whole. Thus, the estimated **return for the nation as a whole is \$3.00 for every \$1.00 invested in completing the ADHS.**

Key Conclusions:

- **Regional Economic and Job Gains:** Completing the ADHS is projected to create 80,500 jobs and \$3.2 billion in wages annually, and to generate over \$5 billion a year in increased regional economic activity by 2035.
- **Improved National Freight Movement:** Over 65 percent of the benefits to freight movement will accrue outside Appalachia, suggesting the importance to the national economy of completing the ADHS.
- **National Efficiency Savings:** Nationally, savings in travel time, fuel and non-fuel operating costs, and increased safety are estimated to grow to \$5.1 billion annually by 2035.
- **Positive Benefits for Nation and Region:** Completion of the ADHS is expected to result in significant benefits in excess of cost from both national and regional perspectives, with a national return of \$3.00 for every \$1.00 invested in completing the ADHS.
- **Enhanced Competitiveness:** ADHS completion will enhance the future economic competitiveness of the nation's and Region's economies by improving freight and commodity flows through additional capacity for the national transportation system.
- **Global Trade Network:** Completing the ADHS will provide the nation and the Region with important linkages in a long-distance network that serves a growing domestic and global trade environment.