The Southwestern Pennsylvania Commission’s (SPC) Regional Traffic Signal Program was established to assist local municipalities with improving traffic signal operations by optimizing signal timings and upgrading existing signal equipment. The Greentree Borough Signals In Coordination with Equipment Upgrades (SINC-UP) Project is a traffic signal project with the goal of optimizing signal operations at intersections along the Greentree Rd (SR 121) corridor while considering all users of the intersections [See map below for project area].

Traffic Signal Coordination:
- Improves safety because vehicles stop less often, which reduces the probability for rear-end crashes
- Benefits the environment by reducing vehicle emissions
- Reduces travel costs by reducing the amount of time stopped at red lights
- Saves money at the gas station by reducing fuel consumption

As part of this project, many intersections received new signal controllers and/or cabinet assemblies, battery backup and/or electrical services, and emergency vehicle preemption. Ethernet Radios and/or Global Positioning Satellite antenna and receivers were installed at the intersections to allow for coordination. Coordination of traffic signal is one of the most cost effective ways of improving traffic flow along a corridor.
Travel Improvements:
The results showed the average PM Peak travel time improved over 20%. On average, southbound stops improved by 50% during the weekday peaks.

Prior to this SINC-UP Project, motorists typically experienced frustration of consecutive stopping at traffic signals due to the uncoordinated signals. This retiming project coordinated the traffic patterns among these intersections which alleviated consecutive stopping and reduced the motorist’s frustration.

Summary of First Year Benefits

- Reduced Vehicle Hours of Travel: 253,752
- Reduced Total Pollutant Emissions: 34,306 kg
- Reduced Number of Stops: 239,300 gallons
- Reduced Fuel Consumption: 4,558,678
- Total Benefit: $5,328,887

Benefit Cost Ratio: 51:1

https://www.spcregion.org/trans_ops Traff_vids3.asp