# ESO

*A growing utility company operates a mixed fleet of more than 1,000 vehicles stocked with different sets of supplies and equipment. Its labor force contains both union employees and non-union contractors who operate with different rules and costs. The company needs to supply thousands of customers daily with new installations, maintenance, and repair. Here is a product that could help simplify this complex logistical situation.*

**How It Helps:** Energy Service Optimization (ESO) software can help a company manage a mobile workforce more efficiently. It can reduce costs and improve efficiencies by 25 percent or more. It also can increase available resources, and improve response time, customer service, and customer satisfaction. This product can take into account more variables than competing tools and is easily customized to meet the special needs of customers. A flexible, modular solution, it provides the necessary tools to solve specific problems without overwhelming the user. The algorithms themselves originally were econometric and are therefore well-suited to the needs of the business world.

**How It Works:** To create the algorithms that drive the ESO software, researchers refined econometric models. Econometric models address the allocation of scarce resources, taking into account supply and demand, and are commonly used to set economic policy or make decisions on pricing, inventory, and production. As applied to service delivery, the software balances scarce resources and considers many critical factors—routing, appointment times, employee compensation plans, resource availability, skills, inventory, tasks, and customer preferences—to determine which staff member would best meet the demands of a given service call. This leads to more efficient staff deployment and service fulfillment.

**How Much It Will Cost:** The price for ESO software ranges from $50 to $200 per month per managed resource, and $1,000 to $4,000 per managed resource for a perpetual license. A managed resource is typically a field technician.

**When It Will Be Ready:** The software is now available. Leading companies in broadband, utilities, manufactured goods, and technology, such as Southern Union Gas, Time Warner Cable, BancTec, and John Deere, are using ESO software to optimize the economic performance of their service supply chain management operations.

**Who Is Working On It:** This product was developed by PointServe, Inc. Dr. G. Edward Powell founded PointServe in 1996 with the vision of applying economic optimization technology to service supply chain management. Today, PointServe is a full-service software company that offers management solutions and tools that increase capacity, improve customer service, and reduce costs. The company remains privately held and has received more than $50 million in private investment. PointServe has approximately 40 employees and occupies about 10,000 square feet of office space in Austin, Texas, and several thousand square feet of data center space in Dallas, Texas. For more information, contact G. Edward Powell of PointServe at (512) 617-5300 or epowell@pointserve.com. The company Web site is www.pointserve.com.

### MDA Origins

In 1988, Dr. Powell was a member of the technical staff at the Massachusetts Institute of Technology's Lincoln Laboratory, where he developed advanced forecasting, modeling, and simulation algorithms for autonomous satellite navigation. The algorithms were designed to allow BMDO's Midcourse Space Experiment satellite to control its own resources while optimizing observing time. These algorithms now represent the core of PointServe's ESO software solutions.