

Technologies for Which Commercial-Potential Assessments Have Been Completed

More competitive renewable energy

High-Throughput Manufacturing of High-Efficiency Solar Cells
Method for Forming Thin Semiconductor Films
Self-Actuating Spillway Control Waste
Solar Skylite Water Heater
The Sunlight Pipe
Ultra-Lowhead Ambient-Pressure Hydroturbine
Float-Zone Silicon Sheet Growth
Two-Phase Hero Turbine with Curved No Separation Nozzles
Extra-Focal, Convective Suppressing Solar Collector

New bioenergy, agricultural, and wood-products technologies

Reactor/Separator for Ethanol from Cellulosics
Anaerobic Pump
Cardboard Recycling System for Manufacturing Firestarter Products
Irrigation Valve Solenoid
Harvesting Technology for Chinese Tallow Tree Oil Seeds
Second-Stage Drying System
A New Ozone Monitor
Process/Apparatus for Drying Utility Poles and Heavy Timber
Christian Veneer Dryer
Stalk and Root Embedding Apparatus
Method & Apparatus for Energy Efficient Drying
Apparatus for Removing Bark from Whole Logs
Molten Film High-Intensity Paper Dryer
Linear Corrugating
Clean Production of Coke from Waste Carbonaceous Fines
Automatic Oxygenation System for Aquaculture
Modular Agricultural Carbonizer/Incinerator

Enhanced building systems

High R-Value Environmentally Safe Rigid Foams
High-Wattage Energy Saving CFL Adaptor for Recessed Downlights
Exterior Central Air Filtering System
Ultraflow Automated Plumbing System
Improved Poured-Concrete Wall-Forming System
"System 150" Insulated-Foundation System
Heat and Mass Transfer System
Method and Apparatus for Cleaning Cooling Towers While System is Online
Single-Crystal Whisker Electric Light Filament
Magnetic-Seal Interior Insulating Window
Therma-Wall Gas-Filled Panels

Gibbar-Wall System
Whitecap
Energy Efficient Skylight (SEALight)
Method of Constructing Insulated Foam Homes (AMHOME)
Insulation Containment Apparatus (The Ultimate "R")
Electronic Starter Device for Fluorescent Lamps
RR-1 Insulating Screw Cap
Ice Bear: Thermal Energy Storage for the Small Packaged Terminal Air Conditioning Unit
Dehumidification Enhancement of Air Conditioners by Desiccant Moisture Exchange
Elastomer-Bed Air Conditioner/Heat Pump/Heat Recovery

Utility power generation and efficiency enhancements

Electric Utility Energy-Storage Device
Load-Management Device and Method of Use
Flow Integrating Section for a Gas Turbine Engine
Fiber-Optic Current Transformer
Coal (Fired) Air Turbine "CAT" Cycle
Surface-Profiling System Optimized for the Inspection of Turbine Blades
Clean Energy from Municipal Solid Waste
Power Guard
Hydro-Pneumatic Apparatus for Harnessing Ultra Low-Head Hydropower Steam Generator
Feedwater Control System
Load-Management Device and Method of Use
Electric Utility Energy Storage Device
Fiber-Optic Current Transformer

Improved industrial processes, equipment, and materials

Nickel-Based Superalloy with Improved Weldability and Oxidation Resistance
Molten Film High-Intensity Paper Dryer
Laminated Ceramic Cutting Tool
Lattice Block Materials: Three-Dimensional, Welded-Fiber, Structural Bias-Ply Textiles
Recovering Acid and Metal Salts from Pickling Liquors
Composite Electrodes for Advanced Electrochemical Applications
Microwave Treatment for Pressed Garments
Enhanced Method for Producing Glass Fiber
Metallurgically Bonding Aluminum-Base Inserts within Aluminum Casting
Molten-Metal Flow Control System
Laser Ablative Chemical Etching (LACE)
Pipe-Cleaning Machine
Sag-Resistant Pinhole-Free Coatings
Fusion-Bonded Powder Coatings Applied to Inside of Tubular Goods
Ultraviolet Radiation for Crosslinking of Polybis (Methoxyethoxyethoxy) Phosphazene
Tribopolymerization of an Anti-Wear Mechanism
Resistance-Welder Adaptive Control

Dynamic Measurement Scheme for Characterization of Material Property Evolution
Synthesis & Sintering of Fine and Ultrafine Grain NZP Ceramics
Whisker-Reinforced Glass Ceramic
Replacement of Thermally Produced Calcined Clay with Chemically Structured Pigment
Ceramic Fabrication and Compaction Process
Full-Strength Flush-Joint Pipe Connection
Wear-Resistant Composite Structure of Vitreous Carbon Containing Convoluted Fibers
Apparatus for Forming Particles into Shaped Articles
High-Density Active Carbon Electrodes
Hollow Fiber Absorber for Separation Applications
Automated Thermal Treatment of Metals with a Mechanically Fluidized Vacuum
High-Speed, Precision Diamond Particulate Edged Bandsaw
Ozone Generator Dielectric Improvement
Ceramic-Refractory Coatings
Hafnium Carbide Crystal Fiber for Ceramic Cutting Tool Reinforcement
Improved Radiant Burner Material
4000° Radiant Burner Screen Material
Electrolytic Regeneration of Acid Cupric Chloride Printed Circuit Board Etchant
Process to Recover Acid and Metal Salts from Pickling Liquors
Acme-Nut's Lubricant Retaining Grooves
Insert Drill Having Three or More Flutes and Method of Manufacture
Thermal Heat Diffusion Treatment of Bulk Powders
Laminated Ceramic Cutting Tool
Electric Rotary Furnace for Glass Molding (Repressing) Precision Optical Blanks
Apparatus and Method for Filtering Molten Metal
Method for Producing Glass Fiber
Laser Ultrasonic Furnace Tube Coke Monitor
Composite Electrodes for Advanced Electrochemical Applications
Single Device Equivalent to CMOS
Method of Making Steel Strapping and Strip
Silicon Semiconductor Wafer Test
A Pilot Plant Processor for the Production of Silicon
Dye and Pigment Removal from Recycled Plastics
GFX: System for Recovery of Waste Hot Water Heat Energy
Globelin Loom
Carbon-Fiber Composites with Improved Resistance to Fatigue
Burner-Control System
Environmental Tensometer
Fiber-Optic Anti-Cycling Device
The Energy Saver
Method of Recycling Hazardous Waste
Process and Apparatus for Extraction and Recovery of Lead
Foamed Recyclables
Surface Plasmon High-Efficiency HDTV Projector
Hydrodyne Process for Tenderizing Meat
Sterol Ice Nucleation Catalysts

Water Saving Device for Toilets: Smart Flapper
Liquid Leak Detection System (Check-A-Leak)
Cyclic Microwave Treatment of Pressed Garments
Peripheral Mower Blade
Methods and Devices for Energy Conservation in Refrigerated Chambers
Electronic Refrigerant Leak Detector
Refrigerator with Pan Chiller system
Development of Energy Efficient Refrigerator Compressor
Membrane Technology for Ammonia Refrigeration Systems

More efficient transportation technologies

Alvar Engine
High-Pressure Electronic Common Rail Fuel Injection System for Diesel Engines
Carsonite Noise Barrier Wall
Process for Manufacturing an Asphalt Modifier/Sealer from Scrap Tires and Waste Oil
Flywheel Electric Battery
Improved Cadmium Electrodes for NiCad Batteries
Dual-Conversion System for High Output, Medium Speed Diesel Engine
Clemson Camshaft
The Turbo-Z Battery Charging System
Combined Battery and Structure for Heightened Energy Storage in Electric Vehicles
Seacoaster
Flow Integrating Section for a Gas Turbine Engine
The Road Patcher
Traffic Assist Traveler Information System

Cleaner, more efficient fossil-fuel retrieval and use

Down-Hole Production Pump and Circulation System
Process for Drying and Stabilizing Low-Rank Coals
Process for Sulfide Reduction & Increased Oil Recovery
Method & Tool for Logging & Drilling
Ejecting Particulates from the Flow Path of a Coal-Fired Turbine Generator
Automatic Gas Light
Ultrasonic Inspection of Tubulars and Vessels
2X4 Drilling and Hoisting System
Reciprocating Rod Pump Seal Assembly
Totally Automated Production System
Vibrating Counter-Flow Heat Exchanger for Hot Solids
New Technology for Sulfide Reduction and Increased Oil Recovery
Density Separation in Complex-Mode Vibration Fluidized Beds
Complex-Mode Vibration-Fluidized Bed for Coal Pyrolysis
System for Discovering the Locations of Sea Floor
Combustion of Municipal Solid Wastes with Oil Shale in a Circulating Fluidized Bed

Higher efficiencies in the commercial sector

Method and Device for Energy Conservation in Refrigerated Chambers
Waste Hot Water Recovery System
Dehumidification Enhancement of Air Conditioners
Linear Motor Refrigerator Compressor
Peripheral Mower Blade

Greater safety for law enforcement and corrections

Tiger Vision Night Vision Device
Less-Than-Lethal Launcher and Projectile Module System
Blast-Initiation Devices
Automated Light Survey System

Innovations in electronics

Laser Television
Electronic Refrigerant Leak Detector
Electronic Starter Device for Fluorescent Lamps