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Global Warming Prevention Technologies Inc.

GLOBAL WARMING PREVENTION TECHNOLOGIES (GWPT) INC PRESENTS THE S.I.R.T.* CLEAN-COAL SOLUTION

THE SOLUTION TO SMOG AND BLACKOUTS

- PATENTS PENDING IN U.S.
- PATENTED IN CANADA

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CLEAN-COAL ELECTRICAL GENERATION IS THE KEY TO ENERGY SECURITY AND THE HEALTH OF THE COMMUNITY and NATION

- ~700 COAL FIRED PLANTS IN NORTH AMERICA ALONE. 150 MORE PLANNED FOR THE US
- TRANSMISSION LINES AND SWITCHES IN PLACE
- NO PIPELINES TO SECURE
- VAST AMOUNTS OF CHEAP ENERGY ARE AVAILABLE IN COAL
- THE KEY IS TO CLEAN THE COAL SMOKE AND SEQUESTER THE CO₂



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CLEAN COAL FIRED ELECTRICAL GENERATION IS THE KEY TO SAVE THE TAXPAYER BILLIONS IN CONTROVERSIAL NUCLEAR WASTAGE

- ALL EXISTING COAL PLANTS CAN BE ECONOMICALLY RETRO-FITTED TO COMPLETELY CLEAN UP THE TOXIC EMISSIONS THAT CREATE SMOG AND IT'S DETRIMENTAL HEALTH EFFECTS
- S.I.R.T. COSTS ARE \$6/MEGA WATT HOUR (\$0.006 per kWh) OR APPROX \$200 M CAPITAL COST FOR A PLANT THE SIZE OF LAKEVIEW GENERATING STATION (1200 -2400 MW) Verses \$3-4 Billion for equal new nuclear power or other.
- THIS COST IS ONLY A FRACTION THAT OF NUCLEAR OR NEW GAS POWER PLANT CONSTRUCTION and CO2 CAN BE SEQUESTERED.
- CANDU REACTORS SHARE 19 DESIGN FEATURES WITH THE CHERNOBYL REACTOR SO COAL IS SAFER AND CHEAPER



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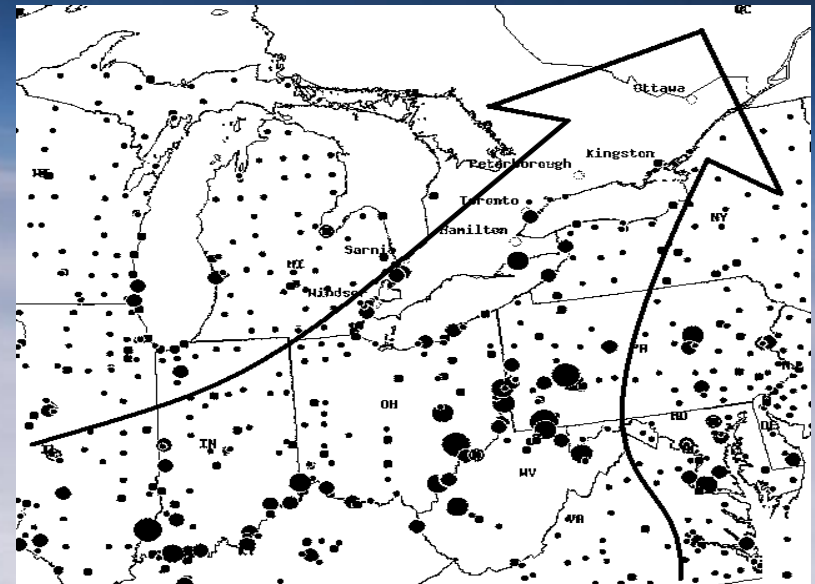
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GWPT INC HAS THE CLEAN-COAL SYSTEMS TO ABOLISH THE SMOG PROBLEM

➤ CLOSING THE LAKEVIEW COAL PLANT IN TORONTO, CANADA DID NOT CHANGE THE AIR QUALITY FOR THE RESIDENTS OF MISSISSAUGA

➤ INSTEAD THE AIR MAY WORSEN AS THAT POWER IS NOW IMPORTED AT EXTRA EXPENSE TO THE RATEPAYER FROM DOWNWIND U.S. COAL PLANTS WITH LITTLE OR NO POLLUTION CONTROLS

SMOG EVENT WINDS



RELATIVE DOT SIZES REPRESENT SIZE OF COAL SMOKE SOURCE



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CLEAN-COAL FIRED ELECTRICAL GENERATION IS THE KEY TO BREATHABLE AIR

- GWPT INC. HAS DEVELOPED THE S.I.R.T. CLEAN COAL SCRUBBER TECHNOLOGY TO ADDRESS ALL OF THE FOREGOING PROBLEMS FROM EXISTING COAL FIRED PLANTS
- GWPT INC. USES THE SAME STATE OF THE ART REVERSE OSMOSIS MEMBRANE SYSTEMS USED TO MAKE CLEAN DRINKING WATER
- GWPT INC. WILL USE THESE VERY SAME REVERSE OSMOSIS SYSTEMS TO MAKE THE AIR BREATHABLE AGAIN. PREVIOUS ATTEMPTS TO UTILIZE TECHNOLOGIES SUCH AS CATALYTIC OR NON-CATALYTIC REDUCTION OR ELECTROSTATIC PRECIPITATORS HAVE HAD MARGINAL SUCCESS ONLY.





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CLEAN-COAL FIRED ELECTRICAL GENERATION IS THE KEY TO A CLEANER ENVIRONMENT

- **THE S.I.R.T. CLEAN COAL SCRUBBER TECHNOLOGY USES A REVOLUTIONARY AND PATENTED CLOSED LOOP WATER SCRUBBER DESIGN**
- **THE S.I.R.T. CAN BE ADDED ONTO ANY COAL PLANT NO MATTER ITS AGE QUICKLY AND EASILY**
- **COSTING ONLY \$6 / MWH (\$.006 per KWh) TO OPERATE IT IS BY FAR THE LEAST EXPENSIVE OPTION TO THE ENERGY CRISIS**

Contaminants	Contaminants
Polycyclic Aromatic Hydrocarbons (PAH's)	Synthetic Organic Compound (SOC's)
Hydrochloric acid	Chromium
Sulphuric acid	Copper
Ammonia	Manganese
Fluoride	Mercury
Chloride	Nickel
Sulphate	Vanadium
Sulphide	Zinc

Depending upon the feed water characteristics, the operating conditions, and the RO configuration, the N-R RO system effectively removes up to 99% of the contaminants. Water recovery ranges from 70 to 90%. The clean water is reused/recycled.



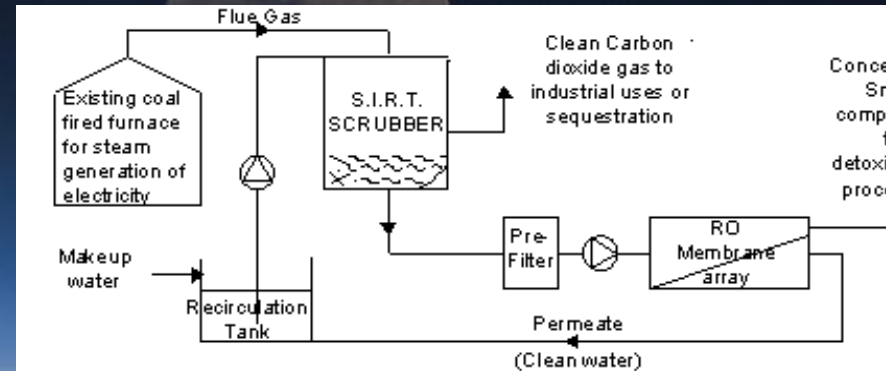
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S.I.R.T. Advantages:

the most COMPREHENSIVE and cost effective way of generating clean electricity
From existing coal plants (\$6/MWh)

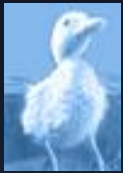
- Removes metal ions like chromium, copper, manganese, mercury, nickel, vanadium and zinc;
and Synthetic Organic Compounds (SOC'S)
- Removes inorganic acids and other dissolved solids
- Over 99% recovery in multistage treatment, depending upon feed water characteristics
- Closed loop Water can be reused by coal smoke scrubbers and never released to the environment
- Comparatively low energy consumption
- High Stability and reliability
- Ease of operation and minimal operation cost
- The safer and cheaper alternative to nuclear



S.I.R.T.* Process flow diagram clean-coal power plant scrubber, wastewater filtration system



Reverse Osmosis system in operation



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CLEAN COAL FIRED ELECTRICAL GENERATION IS THE KEY TO THE HYDROGEN ECONOMY

- HYDROGEN IS MERELY A FORM OF ENERGY STORAGE
- FREE HYDROGEN DOES NOT EXIST IN NATURE IN THE QUANTITIES NEEDED TO REPLACE POLLUTING GASOLINE OR DIESEL FUELS
- THE BEST WAY TO GENERATE HYDROGEN IS TO SPLIT WATER WITH ELECTRICITY INTO OXYGEN AND HYDROGEN THROUGH A PROCESS CALLED ELECTROLYSIS
- ELECTROLYSIS NEEDS LARGE AMOUNTS OF RELIABLE AND CHEAP POWER GENERATED BY CLEAN-COAL
- THE KEY IS TO CLEAN THE COAL SMOKE AND SEQUESTER THE CO₂



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THE S.I.R.T. CLEAN COAL TECHNOLOGY IS EASILY ADAPTED TO FUTURE CARBON SEQUESTRATION METHODS

- THE S.I.R.T. CLEAN-COAL TECHNOLOGY CAN CLEAN COAL SMOKE DOWN TO PURE CARBON DIOXIDE FOR REUSE IN INDUSTRY AS A FEEDSTOCK TO OTHER PROCESSES
- THE S.I.R.T. CLEAN-COAL TECHNOLOGY CAN CLEAN COAL SMOKE DOWN TO PURE CARBON DIOXIDE FOR SEQUESTRATION AS A BOOSTER IN OLD OILFIELDS BY INJECTING IT INTO THE GROUND AS IS CURRENTLY BEING EXPERIMENTED WITH IN THE OIL SANDS IN ALBERTA AND WEYBURN IN SASKATCHEWAN
- ANOTHER METHOD IN THE EXPERIMENTAL STAGE PARTICULARLY SUITED TO THE S.I.R.T. TECHNOLOGY IS THE SPRAYING OF THE CARBON DIOXIDE WITH A MIXTURE OF CALCIUM AND ENZYMES DESIGNED TO FIX THE CARBON INTO LIMESTONE AS A BUILDING MATERIAL
- THE BEST WAY TO SEQUESTER CARBON IS IN FORESTS AND OCEANS IN THE FORM OF OXYGEN PRODUCING PLANTLIFE



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THE S.I.R.T. CLEAN COAL TECHNOLOGY CAN EASILY BE ADOPTED IN ALL COUNTRIES

- THE LARGEST USERS OF COAL ARE THE U.S. CHINA AND INDIA.
- S.I.R.T. CLEAN-COAL TECHNOLOGY CAN CLEAN COAL SMOKE SO INEXPENSIVELY THAT THERE WILL BE NO SIGNIFICANT BARRIER TO ITS ADOPTION WORDWIDE
- THE ONTARIO GOVERNMENT NOBLY ATEMPTED TO SET THE BEST EXAMPLE FOR ITS U.S. NEIGHBOURS BY PLEDGING TO CLOSE ALL OF ITS COAL PLANTS BUT UNFORTUNATELY THIS HAS PROVED TO BE UNWORKABLE AS THERE ARE NO GOOD ALTERNATIVES TO GENERATE THE MISSING POWER
- THE KEY IS TO CLEAN THE COAL SMOKE

ADVANTAGES AND DISADVANTAGES OF DIFFERENT FUELS FOR ELECTRICITY GENERATION		
	ADVANTAGES	DISADVANTAGES
COAL	Coal plants are very economical	Large GHG Emissions
Natural Gas	Less GHG Emissions than coal Low Capital costs More fuel-efficient than existing coal plants	More expensive fuel than coal
OIL	Less GHG Emissions than coal	More expensive fuel than coal
Nuclear	Fuel is expensive Less GHG Emissions than coal	High capital costs for emergency and containing and storing radioactive Waste
Hydro	No GHG Emissions Low cost after dam is built Can be stored	High capital cost Dams can cause flooding, affect fish and cause environmental damage
Biomass*	Low level of GHG emissions	Inefficient if small plants are used Not cost competitive
Wind Power	No energy cost Non-polluting	High upfront capital costs An intermittent unpredictable source Not cost competitive Few areas are suitable for wind Generation
Solar	No energy cost Non-polluting Sustainable	Sun's position changes continually so most solar generators have to include an expensive machinery to Make them follow the sun Not cost competitive

*Organic Matter such as pulp waste that can be converted to energy