

PROPANE PRODUCTION, TRANSPORTATION AND UTILIZATION IN RURAL AND URBAN ALASKA

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FOR ALASKA NATURAL DEVELOPMENT AUTHORITY



PROPANE PRODUCTION

- ON NORTH SLOPE, COST DEPENDENT ON OFFTAKE LOCATION 2% TO 35% CONCENTRATION
- STRADDLE PLANT AT YUKON RIVER
- AT FAIRBANKS AS PART OF CONDITIONING GAS FOR LOCAL USE
- AT TIDEWATER, AS PART OF CONDITIONING GAS FOR LOCAL USE OR EXPORT

PRICING ISSUES

- PROPANE 2/3 BTU VALUE OF DIESEL
- PROPANE 2.5 TIMES BTU VALUE OF METHANE
- COMPETITION EXISTS BETWEEN DISTRIBUTORS IN MOST MARKETS
- UTILITIES AND COOPS CAN MAKE AGGREGATED PURCHASES TO INCREASE COMPETITION
- LOCAL DISTRIBUTION CAN ADD TO COST

POTENTIAL USES

- RESIDENTIAL HEATING - RURAL ALASKA 4 TIMES AS MUCH SPENT AS ON ELECTRICITY - FBKS TWICE AS MUCH
- URBAN RESIDENTIAL USE EVEN IF GASLINE
- ELECTRIC UTILITIES AS PRIMARY OR SECONDARY FUEL - AND WITH WIND
- USE BY MINES - REGULATORY ISSUES
- TRANSPORTATION FUEL

MARINE TRANSPORTATION OF PROPANE

- TRUCK TO NENANA \$0.50 PER GALLON
- 100# weight - \$0.64/GAL TO TANANA - \$1.57 TO ST. MARYS
- 20' ISO CONTAINER ECONOMY OF SCALE
- BULK TANK BARGE ALSO EFFICIENT \$0.40/GAL TO TANANA
- SHIPMENT FROM TIDEWATER TO SOUTHEAST
- DIRECT SHIPMENTS FROM NORTH SLOPE

TECHNICAL ISSUES

- STORAGE - 50% MORE STORAGE THAN DIESEL REQUIRED - DENALI COMMISSION
- VAPORIZATION - ARCTIC GRADE PROPANE - BURIED TANKS
- SECURITY OF ALTERNATIVE SUPPLY - PRINCE RUPERT BC BY RAIL
- TRAINING