INDEX

Administrative Procedure Act, 197 Agricultural Act of 1956, 224 Agricultural Products, 52, 164, 236 non-food, 55 Agricultural Trade and Adjustment Act of 1954, 221, 236 Agricultural Trade Development and Assistance Act of 1954, 159, 196, 224 Alumina. (See aluminum.) Aluminum (see also bauxite), 26, 56, 85, 228, 234, 239, 272, 276, 284, 288 ingots, 241 program, 241-245 Aluminum Company of Canada (Alcan), 243, 244 Antidumping Act of 1921, 196 Antimony, 36, 56 Antitrust Acts, 196 Army-Navy Munitions Board (ANMB), 222, 224, 228, 229, 230-232 Asbestos, 31, 57, 171 Association of Natural Rubber Producing Countries (ANRPC). (See rubber.) Atomic Energy Commission, 175, 238 Australia, 30, 233, 261, 270, 272, 277, 278, 279, 280, 285, 286, 287, 289 barter Arrangements, 48, 52, 164, 235 bauxite (see also aluminum), 11, 25, 28, 31, 47, 55, 56, 57, 147, 264, 271, 284 exporting countries, 27 International Bauxite Association, 27, 29, 31, 270-272 ore tax, 80 beryl ore, 16, 171 Brazil, 30, 118, 271, 277, 278, 290 Bureau of Domestic Commerce, 157 Bureau of Land Management, 32 Bureau of Mines, 174, 175, 179, 272 Business and Defense Services Administration, 157, 257 Buy American Act of 1933, 196, 224 Cadmium, 15 Canada, 30, 31, 106, 107, 231, 233, 235, 261, 263, 266, 273, 277, 278, 280, 285, 286, 287, 289 capital investment, 29, 45, 81, 188, 195, 320 capital gains/losses, 91, 92-93, 115, 116, 124, 126, 127, 135 cartels and cartel action, 2, 12, 25, 27-29, 45, 47, 48, 50, 51, 52, 77, 78, 82, 87-92, 98, 99, 103, 147, 158, 163, 183, 188, 196, 198, 264-283 chromite (see also chromium), 16, 30, 48, 94, 171, 264, 274-277, 287 carte] potential, 274 ferrochrome, 276 major use of, 274 chromium (see also chromite), 6, 14, 25, 36, 55, 56, 57, 201, 276, 287, 288 chrome, 48 Clean Air Act, 194 coal, 12, 13, 56, 174, 194, 288 cobalt, 14, 30, 36, 55, 56, 264, 276, 277, 285, 287, 288

columbium, 30, 57, 171, 280, 286 common defense. (See national defense.) Common Market. (See European Economic Community.) Comprehensive Employment and Training Act of 1973, 194 Congressional Committes: House Armed Services Committee, 1, 14, 15, 35 House Committee on Banking and Currency, 1, 15 House Committee on Science and Technology, 1 Joint Committee on Defense Production, 1 Joint Economic Committee, 28 Senate Commerce Committee, 1 Senate Committee on Government Operations, 1 Senate Interior & Insular Affairs Committee, 15 Congressional Budget Office, 192 Congressional legislation, 4, 14-16, 20, 34, 191-198 Congressional Research Service, 192 Connally Hot Oil Act of 1935, 195 conservation, 2, 27, 50, 78, 155, 165, 175, 185-186, 188, 193, 238, 253. 277 consumers, 5, 12, 33, 44, 45, 50, 51, 52, 81, 86, 91, 93, 102, 103, 111, 113, 115, 131, 135, 158, 188, 223 consumption patterns, 7, 47, 50, 52, 81, 82, 83, 86, 155, 188, 195, 202, 260 Controlled Material Plan (crop), 235 copper, 26, 36, 47, 55, 56, 57, 85, 171, 181, 187, 228, 234, 237, 239, 250, 255-260, 264, 284, 285, 287, 288, 290 International Council of Copper Exporting Countries (CIPEC), 28,29,267-270 price of, 267 releases of, 251-255 taxes on, 269 Copper Production Expansion Program, 257 Cost of Living Council, 194 Council of Economic Advisors, 243, 253, 254 Chairman of, 254-255 "Critical Materials; Commodity Action Analyses, " 177 Decision Criteria Model, 3, 21-22, 145, 146-148, 161 defense contractors, 34 Defense Materials System (DMS), 34, 238 Defense Plant Corporation, 176 Defense Production Act of 1950, 14, 15, 34, 159, 193, 194, 195, 197, 221, 223, 225, 233-235, 241, 249, 250, 255, 256 Inventories, 14, 33, 34, 234, 235, 238, 247, 252, 259 Defense Production Administration, 171, 235, 250 Defense Supplies Corporation, 222 Department of Agriculture, 12, 224, 225, 226 Secretary of 224, 229 Department of Commerce, 34, 157, 186, 225, 226, 228, 233, 234, 252, 255, 256, 257 Secretary of, 224, 229, 253, 254, 257 Department of Defense, 34, 157, 175, 225, 227, 228, 235, 238, 242, 243, 245, 247, 248, 253 Secretary of, 254, 257 Department of Energy and Natural Resources, 12, 32 Department of the Interior, 12, 13, 157, 177, 224, 226, 229, 230-232, 235, 256, 271, 274 Secretary of, 224, 229, 257

Department of Justice, 197 Department of Labor, 194 Department of Natural Resources, 12 Department of the Navy, 221 Secretary of, 224, 229 Department of State, 157, 226, 227, 232, 233 Secretary of, 224, 229, 253, 254, 257 Department of Treasury, 161,.322, 224, 242, 252 Secretary of, 15, 224, 229, 253, 254 detente, 12 Domestic Tungsten, Asbestos, Fluorspar, and Columbium-Tantalum Production and Purchase Act of 1956, 224 Duval Corporation, 256-257 Duval Sierrita Mine, 255-257 Economic Stabilization Act of 1970, 196 Economic Welfare Model, 2, 3, 51, 61-64, 77, 87-92, 99-100, 101, 104, 111, 115, 118, 121, 122, 125, 127, 131, 134, 146, 149-151, 158, 159, 161, 162 use of, 64-69 economy, the, 33, 44, 45, 49, 53, 69-70 domestic, 6, 11, 12, 13, 15, 193 industrial, 25 international, 13 Elk Hills, Naval Petroleum Reserve (see also Naval Petroleum Reserves), 83, 267 embargo, 82, 89, 266 Arab, oil 11, 44, 47, 49, 50, 266 Emergency Petroleum Allocation Act of 1973, 193, 195, 196, 197 Endangered Species Act of 1973, 194 energy, 25, 28, 47, 50, 82, 93, 174, 232 conservation plans, 13 consumption of, 195 demand for, 13 price increases, 26 energy industries, 32, 315, 316, 317, 318, 319 Energy Independence Act, 98 Energy Policy and Conservation Act, 13-14, 193 Energy Research and Development Administration (ERDA), 159, 238 Energy Research and Environmental Coordinating Act of 1974, 193, 194, 195, 197 environment, the 17, 12, 46, 47, 161, 174, 193, 194, 202, 315, 316, 318. 319 protection and preservation, 285 R&D on ecosystems, 174 environmental constraints, 11, 277 air quality, 136 availability of water, 86, 136 environment, impact statements, 197 land restoration, 86, 136 land use, 86 runoff, 86 waste disposal, 136 Environmental Protection Agency, 194 European Economic Community, 5, 37, 200, 280, 283-285 Export Administration Act of 1969, 195 Export Control Act, 225 export controls, 187, 188, 195 Export-Import Bank, 176 Export-Import Bank Act, 197 Factoring System, 233 Federal Advisory Committee Act, 197

Federal Energy Administration (FEA), 15, 147, 193 Act of 1974, 193, 194, 195, 196, 197, 198 Federal Preparedness Agency, 160 Federal Reserve System, 5, 200 Federal Trade Commission, 197 Federal Water Pollution Control Act, 194 fibers, 56, 225, 295 finished materials, 17, 26 fluorspar, 31, 57, 171 Foreign Assistance Act, 196 Foreign Military Sales Act, 196 foreign policy, 3, 44, 79, 192, 193, 195 forest products, 55, 56, 225, 288 France, 28, 36-37, 261, 262, 263, 283 Groupment d'Importation et de Repartition des Meteaux (GIRM), 289-290 Ministry of Industry, 290, 291 recycling, 290-291 Societe le Nickel, 290 stockpiling, 290-291 Freedom of Information Act (FOIA), 197 General Accounting Office (GAO), 34, 160, 192 General Agreement on Tariffs and Trade (GATT) agreement, 176, 196 General Services Administration (GSA), 83, 172, 225, 226, 233, 235, 238, 239, 241, 252, 253, 255, 256, 257, 258, 259, 260, 263 Administrator of, 254 gold, 55, 176, 181 Great Britian (see also United Kingdom), 28, 263 Gross Energy Policy (GEP), 101 Gross National Product (GNP), 50, 93, 101, 102, 128, 236, 270 Groupment d'Importation et de Repartition des Meteaux (GIRM). (See France,) Hanna Nickel Smelting Co., 257 Harbord List 221 Helium Act of 1925, 195 House Armed Services Committee. (See Congressional committees.) House Committee on Banking and Currency. (See Congressional committees.) House Committee on Science and Technology. (See Congressional committees.) hydropower, 266 ilmenite. (See titanium.) import dependence, 11, 25-26, 49, 53, 54, 77, 86, 226 degree-of-dependence rule, 50 Import disruptions, 2, 48, 50, 52, 53-54, 77, 93, 104-115, 147, 158, 164, 188 Indonesia, 30, 261, 264, 287, 288, 290 Industrial Feasibility Test, 232 Industrial Sector, (See U.S. industry.) inflation, 6, 11, 33, 223, 195, 201, 266 Information Bureau of Copper, 267 International Bank of Reconstruction and Development, 176 International Bauxite Association (IBA). (See bauxite.) international commodity agreements, 182-185, 188 International Council of Copper Exporting Countries (CIPEC). (See copper.) International Energy Agency (IEA), 5, 78, 200 international energy program, 13

International Monetary Fund (IMF), 262, 263, 265 International Nickel Co., Inc. (Inco), 257-256 International Rubber Study Group, (See rubber.) International Tin Agreements, 30, 85, 160, 183, 185, 264, 280-281 First ITC Agreement, 260 Third ITC Agreement, 260 Fourth ITC Agreement, 261-262 Fifth ITC Agreement, 260, 262-263, 280 International Tin Council (ITC), 5, 6, 11, 121, 200, 201, 260-264, 280-281 International Trade Inventory (ITI), 184 iron ore, 25, 31, 36, 47, 53, 55, 56, 225, 264, 277-278, 284, 288, 296 Caracas Group, 277 Scrap iron, 277 Iran, 31, 264, 266, 287, 290 Jamaica, 27, 31, 80, 270, 271, 272 Japan, 25, 28, 36, 261, 278, 283 Cycling Association, 289 Import dependence, 285-286, 287 Ministry of International Trade and Industry (MIT]), 36, 285, 286-289 stockpiling, 285-289 Japan Export Import Bank, 288 Japan Metal Mining Public Corporation, 36 Japan Mining Public Corp., 288 Japan Rare Metals Co., 286 Japanese Mining Association, 289 Joint Chiefs of Staff (JCS), 230, 231, 233, 238 Joint Committee on Defense Production (See Congressional committees.) Joint Economic Committee. (See Congressional committees.) Kaiser Le Nickel Corp., 257 labor sector, 80, 233, 241, 249, 315, 316, 317, 318, 319 strikes, 106, 107, 254 lead, 55, 56, 57, 171, 181, 234, 235, 236, 264, 278, 284 less developed countries (LDC), 201, 267, 277, 279 London Metal Exchange, 54, 118, 181, 262, 270 magnesium, 272 Malaysia, 30, 118, 261, 281, 288 manganese, 11, 14, 30, 48, 55, 56, 57, 171, 264, 278 seabed recovery, 278 market systems, 6, 191, 201 American, 32, 192 marketplace, the, 1, 6, 18, 54, 80 government intervention in, 170, 193, 201 operations, 84-87 markets: domes~ic, 2, 48, 51, 54 international, 2, 32, 48, 54, 115, 147 Materials Information System (MIS), 151-155 Materials Selection Criteria, 146, 149 materials substitution, 28, 173-176, 186-187, 188, 238 Mercurio Europeo. (See mercury.) mercury, 31, 57, 171, 181, 264 cartel, 29, 272-4 decline in price, 273-274 Mercurio Europeo, 273 Spanish-Italian Cartel, 273 Metals Reserve Company, 222 mica, 171

Military security, 14 minerals, 55, 255 mineral leasing laws, 32 minerals inventory system, 13 Minerals Policy Report, 32 mining, 174 industry, 230, 234, 235, 236 surface, 32 Mining and Minerals Policy Act of 1970, 32, 161, 194 Mining Industry Council, 36 Ministry of International Trade in Industry (MITI). (See Japan.) Mobilization Readiness Program, 235-241 molybdenum, 36, 255, 276, 285, 286, 287, 288 National Aeronautics & Space Administration (NASA), 34, 175 National Bureau of Standards, 173, 175 National Commission on Materials Policy (NCMP), 13, 32, 46, 160, 172, 173, 174-179, 186 National Commission on Supplies and Shortages, 1, 13, 155 National defense (see also national security), 193, 195, 223, 233, 249, 250, 252, 257 National Economic Stockpile Association, 15 national emergencies, 41, 48, 222 National Environmental Policy Act of 1969, 194, 197 National Materials Policy Act of 1970, 194 National Science Foundation, 1975 national security (see also national defense) 35, 195, 234 National Security Council, 160, 224, 235 National Security Resources Board (NSRB), 231-232, 233, 235 National Strategic Petroleum Reserve, 98 natural gas, 12, 55, 56, 57, 170, 266 products, 174 Natural Gas Act, 32 natural resources. (See resources) Natural Resources Coordinating Committee, 13 Naval Petroleum Reserves (see also Elk Hills Naval Petroleum Reserves), 159 New York Commodity Exchange, 181, 253 New York Stock Exchange, 253 nickel, 31, 36, 56, 57, 107, 187, 234, 239, 252, 257-260, 264, 276, 278-9, 285, 286, 287, 288 Societe le Nickel, 290 nuclear power, 266 Nuclear Regulatory Commission, 34, 238 Office of Coal Research, 175 Office of Defense Mobilization (ODM), 234, 235, 236, 252 Office of Emergency Preparedness (OEP), 157, 159, 172, 199,224, 225, 226, 227, 241, 246, 247, 252, 253, 255, 256, 257, 259 Director of, 254 Office of Management and Budget (OMB), 162, 248 Office of Minerals Exploration, 176 Office of Technology Assessment (OTA), 1, 155, 179, 186, 187, 192 oil embargo. (See Organization of Petroleum Exporting Countries-OPEC) Operating Cost Model, 124, 133, 141, 161, 162, 163 OREMET, 248 Organization of American States (OAS), 5, 200 Organization of Petroleum Exporting Countries (OPEC), 11, 26, 27, 31, 80, 85, 93, 195, 191, 201, 264-266 oil embargo, 11, 33, 47, 49, 50, 266 Overseas Private Investment Corp., 176

Paley, Commission, 12 petrochemicals, 56 industry, 50 products, 28 petroleum, 6, 11, 12, 15, 25.28, 31,48, 53,55, 56,57,82,83,93,100, 101, 163, 174, 201, 264-266 consumption of, 102 prices, 44, 265 products, 187 reserves, 13, 15, 83, 98, 159, 267 synthetic oil, 44, 174 pharmaceuticals, 56 phosphate, 264, 279 plastics, 55, 56, 272 platinum, 11, 14, 25, 30, 53, 56, 57, 181, 264, 279 substitutes for, 279 President's Materials Policy Commission, (See Paley Commission) price controls, 126 private industry. (See U.S. industry.) process substitution, 28 producer/consumer councils, 5 public lands, 178, 188 public transportation, 50, 228 rationing, 13, 50, 81 fuel, 194 raw materials, 17, 85, 222, 174, 175, 176, 228, 235, 236, 246 markets for, 223 Reconstruction Finance Corporation (RFC), 176, 222 recycled materials, 42, 178 tax credits for use of, 177 recycling, 12, 36, 42, 48, 51, 155, 170, 174, 176, 177-8, 188, 289 industry, 177 relevance trees 19, 70-72, 154, 187, 295-297 research and development, 170, 173-176, 188, 315, 316, 317, 318, 319 NCMP recommendations for, 174-179 resources, 46, 82, 107 shortages of, 13 waste materials as, 46 RMI, 248 rubber: Association of Natural Rubber Producing Countries (ANRPC), 281 International Rubber Study Group, 30, 281 natural, 30, 56, 57, 264, 281 synthetic, 30, 225, 281 Rubber Reserve Company, 222 Russia. (See U. S. S. R.) rutill. (See titanium,) Saudi Arabia, 31, 264, 265, 266 scrap material, 36, 42, 177, 187, 227, 277 Senate Commerce Committee, (See Congressional committees,) Senate Committee on Government operations. (See Congressional committees.) Senate Interior and Insular Affairs Committee. (See Congressional committees.) Semiprocessed materials, 17 Silver, 16, 55, 57, 176, 181, 252 Sunshine Mine, 107 Small Business Act, 196

Small Business Administration, 256 Societe Ie Nickel (SLN). (See France.) South Africa, 11, 30, 274, 276, 278, 280, 287 Spanish-Italian Cartel. (See mercury.) special-interest groups, 6 stainless steel, 272, 276 steel, 11, 26, 225, 228, 284, 286 Stockpile Committee, 232 Stockpile Policies (SP): SP-1, 50, 53, 56-57, 78, 80, 82-83, 87-104, 151, 158, 163-164, 188, 198 SP-2, 50, 53-54, 56-57, 78, 104-115, 128, 151, 158, 164, 188 SP, 50, 54, 56-57, 78, 79, 84, 115-124, 151, 164, 188 SP, 50-51, 54, 56-57, 78, 81, 86, 125-133, 151, 165, 188 SP-5, 51 56-57, 78, 81, 83, 134-142, 151, 158, 165, 188, 198 specific purposes, 47-48 Stockpile Storage Committee, 225 Stockpiling Act of 1939, 222, 249 Stockpiling Act of 1946, 159, 171, 221, 249 Strategic and Critical Materials Stockpiling Act of 1946, 15, 41, 195, 196, 221, 223, 229, 254, 257 Strategic and Critical Stockpile, 14, 236 Strategic Petroleum Reserve, 13, 15 strikes. (See labor sector.) substitution of materials. (See materials substitutions.) Supplemental Stockpile, 14, 159 supply,3, 179, 185 concentration of, 233 disruptions, 6, 7, 192, 202 foreign, 234 source of, 2, 226, 233 supply/emand, 33, 54, 86, 116, 229, 249, 272 domestic changes, 32 Surplus Property Act of 1944, 222 surpluses/shortage, 115, 116, 117, 127, 132, 134-142, 147, 165, 170, 176, 188, 198 Sweden, 36, 37, 277, 283 stockpiling, 291-293 tax system, 179-181, 291-292 synthetic fuel industry, 44 systems analysis, 18-19 tantalus materials, 30, 286 Tariff Act of 1930, 195 tariff concessions, 176 Tax Reduction Act of 1975, 197 taxation, 37, 126, 250, 320 depletion allowance, 173, 197 tax incentives, 170, 171, 172-3, 179, 182, 188 technology, assessment, 16 definition of, 17-18 TIMET, 248 tin, 16, 30, 36, 56, 57, 118, 123, 164, 181, 239, 260-264, 280-281 International Tin Agreements. (See International Tin Agreements.) International Tin Council. (See International Tin Council.) Titanium, 55, 57, 171, 245-249, 264, 276, 279-280 ilmenite, 57, 279 rutile, 57, 247, 279, 280 sponge, 246, 247 Use in Aircraft industry, 245-247

Trade Act, 196

Trade Expansion Act, 196

tungsten, 36, 48, 55, 56, 57, 127, 128, 131, 132, 133, 165, 171, 187, 239, 264, 280, 285, 286, 287

United Kingdom (see also Great Britain), 30, 36, 37, 261 United Nations, 5, 200, 276

- United Nations Conference in Trade and Development (UNCTAD) IV, 5,6, 12,28, 200,277
- University of Maryland, 77 INFORUM, 77
- U.S. Geologic Survey, 176, 179
- U.S. industry, 5, 11, 41, 48, 49, 80, 198, 229, 315, 316, 317, 318, 319
- U.S. Mint, 234, 252, 256, 259, 260, 270
- U. S. S. R., 6, 11, 30, 48, 118, 201, 260, 261, 274, 276, 278, 287

Vanadium, 187, 264, 276, 280, 285 Venezuela, 31, 264, 266, 277 waste: urban, 175, 177, 178 disposal, 174 welfare economics, 61 West Germany, 6, 25, 36, 37, 200, 260, 261, 284 World War I, 221, 223 World War II, 222, 233, 171, 187, 228, 229, 232, 235, 241 Zaire, 30, 118, 261, 267, 269, 280, 288, 290 Zambia, 267, 269, 270, 280, 285 zinc, 25, 31, 36, 55, 56, 57, 83, 106, 110, 112, 164, 171, 181, 234, 235, 236, 264, 276, 280, 284, 287

zirconium, 286