

# Catalogue for the Guidance of Foreign Investment Industries

Comparison<sup>1</sup> of the English translations of the new 2015 Catalogue against the 2011 Catalogue.<sup>2</sup>

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KEY: [additions](#) | [deletions](#)

## Catalogue of Encouraged Foreign Investment Industries

### I. Farming, Forestry, Animal Husbandry and Fishery Industries

1. Planting, development and production of woody edible oil, ingredient and industrial raw material
2. Development of planting technology of green and organic vegetables (including edible fungus and melon-watermelon), dried fruits, teas and production of these products
3. Development and production of new technology of sugar-yielding crops, fruit trees, forage grass, etc.
4. Production of flowers and plants, and construction and operation of nursery base
5. Planting of rubber, oil palm, sisals and coffee
6. Planting and cultivation of traditional Chinese medicines (~~limited to equity joint ventures or contractual joint ventures~~)
7. Reusing in fields and comprehensive utilization of straws and stalks of crop, development and production of resources of organic fertilizers
- ~~(8) Planting of forest trees (including bamboo) and cultivation of fine strains of forest trees, and cultivation of new breed varieties of polyploid trees~~
8. Breeding of aquatic offspring (except precious quality varieties peculiar to China)

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<sup>1</sup> This redline comparison was created in Microsoft Word. For the convenience of the reader, we have not highlighted changes in numbering or changes in the English translation where the Chinese text has not changed (as these changes reflect differing translations rather than substantive changes). There are instances where the English translations differ from corresponding Chinese text. We have identified and commented only on translation errors we have identified in the course of examining the changes. There are likely to be other translation errors, so readers are encouraged to rely only on the official Chinese version of the Catalogues.

<sup>2</sup> The English translations of the 2015 and 2011 Catalogues compared here are from the official website of the Investment Promotion Agency under the Ministry of Commerce (中华人民共和国商务部投资促进事务局), [www.fdi.gov.cn](http://www.fdi.gov.cn). The translation of the 2011 Catalogue has been deleted since the publication of the 2015 Catalogue translation. The 2015 Catalogue's English translation may be found at: [http://www.fdi.gov.cn/1800000121\\_39\\_1925\\_0\\_7.html](http://www.fdi.gov.cn/1800000121_39_1925_0_7.html).

9. Construction and operation of ecological environment protection projects preventing and treating desertification and soil erosion such as planting trees and grasses, etc.

10. Breeding of aquatic products, cage culture in deep water, large-scale breeding of aquatic products, breeding and proliferation of eco-ocean products.

## II. Mining and Quarrying Industries

11. Prospecting and exploitation of petroleum, natural gas (unconventional oil resources such as oil shale, oil sand, shale gas and coal bed gas) and utilization of coal-bed gas (limited to equity joint ventures or contractual joint ventures)

~~(2) Venture prospecting and exploitation of petroleum, natural gas (limited to equity joint ventures or contractual joint ventures)~~

~~(3) Exploitation of oil and gas deposits (fields) with low osmosis (limited to equity joint ventures or contractual joint ventures)~~

12. Development and application of new technologies that can increase the recovery factor of crude oil (limited to equity joint ventures or contractual joint ventures in the form of engineering service)

13. Development and application of new technologies for prospecting and exploitation of petroleum, such as geophysical prospecting, well drilling, well-logging and downhole operation, etc. (limited to equity joint ventures or contractual joint ventures)

~~(6) Prospecting and exploitation of such unconventional oil resources as oil shale, oil sand, heavy oil and super heavy oil (limited to equity joint ventures or contractual joint ventures)~~

~~(7) Prospecting, exploitation, and beneficiation of iron ores and manganese ores~~

14. Development and application of new technologies for improving the utilization of tailings and the comprehensive utilization of recovery technology of the mine ecology

~~(9) Prospecting, exploitation of such unconventional natural gas resources as shale gas and submarine natural gas hydrate (limited to equity joint ventures or contractual joint ventures)~~

15. Prospecting, exploitation, and beneficiation of scarce mineral resources in China (such as sylvine and chromite)

## III. Manufacturing Industries

### (I) Processing Industry of Farm and Sideline Products

16. Development and production of biology green pollution-free feeds, straws and stalks feeds and aquatic feeds additives

Comment [Author1]: This item is a combination of four items (items (1), (2), (6) and (9)) listed under mining industries in 2011 Catalogue.

17. Aquatic products processing, seashell products cleansing and processing, and development of health food made from seaweed

18. Processing of vegetables, dried fruits, fowl and livestock products

## **(II) Food Manufacturing Industry**

19. Development and production of food for babies and agedness, as well as health-care food

20. Development and production of forest food

21. ~~Production-Development~~ of new technologies and production of natural additive for foodstuff and ~~food ingredients~~ natural perfume material

## **(III) ~~Drinks~~ Manufacturing Industry of Wine, Beverages and Refined Tea**

22. Development and production of drinks of fruits, vegetables, albumen, tea, coffee and vegetables

## **~~4. Tobacco Processing Industry~~**

~~(1) Production of secondary cellulose acetate and processing of tows (limited to equity joint ventures or contractual joint ventures)~~

## **(IV) Textile Industry**

23. Production of multi-functional industrial textile characterized by lightness, high tenacity, high/low-temperature resistance, and chemical and light resistance with the non-weaving, machine-waving and knitting and the composite technology

24. Weaving Dyeing and ~~dyeing as well as~~ post dressing of high-grade loomage ~~face fabric~~ with advanced energy-saving and emission reduction technology and equipment

25. Processing of special natural fiber products satisfying the requirement of comprehensive utilization of ecology and resources and environment protection (including special animal fiber such as cashmere, bamboo fiber, fibrilia, mulberry silk and colored cotton)

## **(V) Garments and Apparel Industry**

26. Production of clothes with computer integrated manufacturing system

27. Production of functional ~~, green and environmentally friendly and~~ special clothing

~~(6) Production of top-grade carpet, embroider and drawnwork product~~

## **(VI) ~~Leather, Coat and Fur, Feather (Down and Feather)~~ Its Products and Footwear Industry**

28. Cleaning processing of leather and fur

29. Post ornament and processing of leather with new technology

~~(3) Processing of top-grade leather~~

30. Comprehensive utilization of feather waste

#### **(VII) Lumber Processing Industry and Wood, Bamboo, Vine, Palm, Grass Products Industry**

31. Development and production of new technology and products for the comprehensive utilization of three remainder of forestry, "sub-quality, small wood and fuel wood" and bamboo in the forest area

#### **~~8. Paper Making and Paper Products Industry~~**

~~(1) Project mainly utilizing overseas timber resources with an annual production capacity of over 300 thousand tons of chemical wood pulp or an annual production capacity of over 100 thousand tons of chemical mechanical wood pulp in the single production line and synchronized construction of top-grade paper and paper plate production (limited to equity joint ventures or contractual joint ventures)~~

#### **(VIII) Manufacturing Industry of Culture, Education, Handicraft, Fine Arts, Sports and Entertainment Articles**

32. Production of high-end carpets, embroidery and drawnwork products

#### **(IX) Petroleum Refining, Coking and Nuclear Fuel Processing Industry**

33. Processing of carbolic oil& wash oil and high-end utilization of coal tar pitch (without modified pitch)~~Deep Processing of needle-coke and coal tar~~

#### **(X) Chemical Raw Material and Products Manufacturing Industry**

34. Development and production of new type down-stream products of ~~sodium-process-bleaching powder~~, polyvinyl chloride and organic silicon

35. Production of supporting raw materials for synthetic materials: hydrogen peroxide propylene oxide-method propylene oxide, ~~epoxy chloropropane from glycerol~~, NDC and 1,4-CHDM, adipic dinitrile synthesized through butadiene method with an annual production of 50,000 or more tons and hexamethylene diamine.

36. Production of synthetic fiber raw materials: ~~caprolactam~~, nylon 66 salt, ~~meltspun spandex resin~~ and 1,3-propylene glycol

37. Production of synthetic rubber: ~~solution butadiene styrene rubber (excluding thermoplastic butadiene styrene rubber), cri-rich butadiene rubber, butyl rubber~~, isoprene rubber, polyester rubber, acrylic rubber, chlorohydrin rubber, ~~ethylene propylene rubber~~ and the special rubbers of fluorous rubber and silicon rubber

38. Production of engineering plastics and plastic alloy: non phosgene-method PC with an annual production of 60,000 or more tons, POM [produced through homogeneous polymerization](#), ~~polyamide (nylon 6, 66, 11 and 12)~~, EVA, polyphenylene sulfide, polyether-ether-ketone, polyimide, polysulfone, polyethersulfone, PAR, [polyphenyl ether& its modified materials](#), liquid crystal polymeride and other products.

39. Fine chemistry: new products and technologies of catalyst, commercialization processing technology of dyeing (pigment) materials, electric chemicals and papermaking chemicals, ~~food additives, feed additive~~, leather chemicals (except N-N DMF), oil additives, surface active agent, water treatment agent, adhesives, inorfil, inorganic nano materials production, and deep-processing of pigment diolame

40. Production of environmentally-friendly printing ink, and aromatic hydrocarbon

41. Production of natural perfume material, synthetic perfume and isolate perfume

42. Production of high-performance coating, [high solids, solventless coatings](#), hydrophobic [automotive](#) paint and supporting waterborne resin

~~(10) Production of HCFCs substitute~~

43. Production of high-performance fluoro resin, fluorous membrane materials, medical fluoro midbody, environmentally-friendly [fluorine](#) refrigeration agent, cleaning agent [and foaming agent](#)

44. Production of fluorine recycling from phosphorus chemical and aluminum smelting

45. Development and production of new technology and products of forestry chemicals

46. Development and production of environmentally-friendly inorganic, organic and biological membrane

47. Development and production of new fertilizers: ~~bio-fertilizer~~, high-density potash fertilizer, ~~compound fertilizer, controlled-releasing fertilizer~~, compound microorganism inoculant, composite microorganism fertilizer, straw and waste decomposing agent and special-function microorganism agent

48. Development and production of new varieties of effective, safe and environmentally-friendly pesticides, new formulations, special-purpose midbody and addition agents as well as development and application of related cleaning technology (methane-method acetochlor, ~~amine-cyanogen method paraquat and~~ aqueous phase-method chlorpyrifos technology, glyphosate recycling chloromethane technology, stereospecific synthesis-method chirality and stereochemical structure pesticide production and synthetic technique of ethyl chloride)

49. Development and production of biopesticide and bio-control products: microbial insecticide, microbial fungicide, agricultural antibiotic, insect pheromone, enemy insect and microbial herbicide

50. Comprehensive utilization and disposal of exhaust gas, discharge liquid and waste residue

Comment [Author2]: "Automotive," the term used in the 2011 Catalogue, has been changed to "industrial" in the Chinese (official) version of the 2015 Catalogue. That change is not reflected in this English translation of the 2015 Catalogue.

51. Production of organic polymer material: covering film for plane, rare-earth cerium sulphide red dye, lead-free in electronic packages, serials of special sizing agent by photoetching for color Plasma Display Panel, small-diameter and large specific surface area superfine fiber, high precision fuel filter paper, and Li-ion battery membrane, [self-healing materials for surface treatment and superhydrophobic nanostructured coating](#)

#### (XI) Medical and Pharmaceutical Products Industry

52. Production of new type compound medication or active composition medication (including bulk drug and preparation)

53. Production of amino acids: tryptophan, histidine, and methionine ~~for feed~~ with fermentation method

54. [Development and](#) production of new anti cancer medication, new cardio-cerebrovascular medication and new nervous system medication

55. Production of new drugs with bio-engineering technology

56. Production of new type bacterin for AIDS, HCV and contraception as well as cervical carcinoma, malaria and hand-foot-and-mouth disease

~~(6) Production of biology bacterin~~

57. Exploitation and production of marine drug

58. Drug preparation: production of new formulation using new technologies of sustained-release, release, targeting and percutaneous absorption

59. Exploitation and production of new type of pharmaceutical adjuvant

60. Production of antibacterial raw material drug for animal use (including antibiotics and synthetic chemicals)

61. Production of new products of antibacterial drug, insect repellent, pesticide, anticoccidial drug for animal use and new formulation

62. [Exploitation and](#) production of new diagnosis reagent

#### (XII) Manufacturing Industry of Chemical Fiber

63. Production of hi-tech chemical fiber (except viscose) of differential chemical fiber, aramid, carbon fiber, polyethylene of high-strength and high-mode, polyphenylene sulfide (PPS) and so on

64. Production of new style of fiber and non-fiber polyester: PTT, PEN, PCT and PETG

65. Production of biopolymer fiber with new type renewable resources and green environmentally-friendly technology, including new solution-method Lyocell, regenerated cellulose fiber with bamboo and fiber as raw materials, PLA, chitosan fiber, PHA and plant and animal protein fiber

66. [Exploitation and production of new type of polyamide](#), ~~with a single line daily production capacity of 150 or more tons~~ ([nylon11](#), [nylon1414](#), [nylon46](#), [long carbon chain nylon](#) and [high-temperature-resistant nylon](#))

67. Production of meridian tyre aramid fiber and tyre cord

### (XIII) Industry of [Rubber and Plastic Products](#)

68. Development and production of new type photo-ecology multi-functional broad width agricultural film

69. Digestion and recycle of waste plastics

70. Exploitation and production of new technology and new production of soft plastic package (high barrier, multi-function film and raw material)

### (XIV) Non-metal Mineral Products Processing Industry

71. Development and production of energy-saving, environmentally-friendly, waste recycling, light and strong, high-performance and multi-functional building materials

72. Production of using plastic to replace steel and wood, energy-saving and high-efficient chemical architecture materials

73. Production of not less than 10,000,000sq.m. elastomer (per year), plastic changeable asphaltum waterproof coiled materials, EPDM waterproof coiled materials with width (of not less than 2 meters) and matched materials, PVC coiled material with width (of not less than 2 meters), and TPO waterproof coiled materials

74. Development and production of functional glass with new technology: screen electromagnetic wave glass, micro-electronics glass base plate, penetrating infrared non-lead glass, electron grade large spec quartz glass products (pipe, plate, crucible and instrument vessels), optical property high-quality multi-functional windshield glass, extreme materials and products for information technology (including waveguide-level high-precise optical fiber pre-fabricating quartz glass sleeve and ceramic baseplate), and refining and processing of crystal raw materials with high purity of (99.998% or above) and super-purity of (99.999% or above).

75. Production of film battery conductive glass, solar light-concentration glass [and conductive glass for buildings](#)

76. Production of glass fiber products and special glass fibers: dielectric glass fiber, quartz glass fiber, high silica glass fiber, strong and flexible glass fiber, ceramic fiber and products

77. Production of optical fiber and products: coherent fiber bundle and laser medical optic fiber, super-second generation and third generation microchannel plate, optical fiber surface plate, image inverter and optical glass cone

78. Standardized refining of ceramic material and production of high-level decorative materials used for ceramics

79. Production of environmentally-friendly refractory material (without chromizing) used in furnaces such as cement, electronic glasses, ceramics and porous carbon bricks

80. Production of AlN ceramic base piece, and multiple-hole ceramics

81. Production of inorganic, non-metal materials and products: complex materials, special kind of ceramics, special kind of airproof materials (including quick oil sealed materials), special friction materials (including quick friction braking products), special cementation materials, special type latex materials, water rubber materials and nano materials

82. Production of organic-inorganic composite foam insulation materials

83. Production of high-tech compound materials: sequential fiber increasing thermoplasticity compound materials and prepreg, colophony compound material moulding craftwork assistant materials (endure heat >300°C), colophony compound material (including top grade sports articles and light and strong transport tool parts), special function compound materials and products (including deep water and diving compound material products and medical and healing use compound material products), carbon/Carbon compound materials, high-performance ceramic compound materials and products, metal and glass compound materials and products, metallic layered compound materials and products and super-high-pressure compound rubber pipes (pressure ≥ 320MPa) and air bus aviation tyres.

Comment [Author3]: "Top grade," contained in the 2011 Catalogue, has been deleted in the official Chinese (official) version of the 2015 Catalogue. That deletion is not reflected in this English translation of the 2015 Catalogue.

84. Production of precise high-performance ceramics materials: carborundum super-minute powder (purity >99%, average granule diameter <1μm), Si<sub>3</sub>N<sub>4</sub> super-minute powder (purity >99%, average granule diameter <1μm), high pure and super-minute alumina powder (purity >99.9%, average granule diameter <0.5μm), low temperature sintered zirconia (ZrO<sub>2</sub>) powder (sintered temperature <1350°C), high pure AlN powder (purity >99%, average granule diameter <1μm), rutile TiO<sub>2</sub> powder (purity >98.5%), white char black (granule diameter <100nm), barium titanate (purity >99%, granule diameter <1μm)

85. Development and production of top grade artificial crystal and crystal film products: top-grade artificial synthetical crystal (piezo crystal and ultraviolet crystal), super-hard crystal (cubic boron nitride crystal), high temperature resistant and strong insulation artificially synthetic insulation crystal (artificially synthetic mica), new type electric-optic crystal, large power laser crystal and large-sized glittering crystal, and diamond film tools, super-thin artificial diamond saw piece with thickness of 0.3mm or less

86. Deep processing of non-metal mineral products (super-thin comminution, high level purity, fine production, modification)

87. Production of super high power graphite electrode



88. Production of pearlite mica (granule diameter: 3-150 $\mu$ m)

89. Production of multiple dimension and multiple direction integer weaving fabric and profile modeling fabric.

90. Using new dry cement kiln to innocuously dispose solid waste

91. Recycling of building waste

92. Comprehensive utilization of industrial byproduct gypsum

93. Development and application of new technology for the comprehensive utilization of non-metal mining tailings as well as ecological recovery of mining

#### (XV) Non-Ferrous Metallurgical Smelting and Rolling Processing Industry

94. Production of silicon single crystal with the diameter of more than 200mm and polishing piece

95. Production of high-tech non-ferrous metallurgical materials: compound semiconductor materials(gallium arsenide, gallium phosphide, indium phosphide, gallium nitride), high temperature super-conducting materials, memory alloy materials (titanium nickel, copper and iron memory alloy materials) , super minute (nanometer) calcium carbide and super minute (nanometer) crystal hard ally, super-hard compound materials, noble metal compound materials, [light metal compound materials and different material matching](#), aluminum foil used for radiator, middle and high pressure cathode capacitance aluminum foil, special large aluminum alloy materials, aluminum alloy precise model forge product, electrified railway overhead conductor, super-thin copper strip, erosion proof heat exchanger copper alloy material, high-performance copper nickel, copper and iron alloy strip, beryllium copper strip, thread, tube and stick process material, high temperature bearable tungsten filament, magnesium alloy cast, non-lead solder, magnesium alloy and its applicable products, bubble aluminum, titanium alloy ~~strip materials~~[smelting](#) and ~~titanium jointing pipes~~[processing](#), atomic energy grade sponge zirconium, tungsten and deep-processing products of molybdenum.

#### (XVI) Metal Products Industry

96. Development and production of aviation, aerospace, lightened car, automobile and environmentally-friendly new materials (special-purpose aluminum board, aluminum magnesium alloy materials, automobile aluminum alloy frame and so on).

97. Development and production ~~of hardware for construction, hot water heating equipment and hardware parts~~[of light metal semi-solid rapid-forming materials](#).

98. Production and processing (including painting and processing inner and outer surface of the products) of metal packing products (thickness <0.3mm) used to pack all kinds of grain, oil and food, fruits, vegetables, beverages, daily chemical products and such contents

99. Production of section nickel stainless steel products

## (XVII) General Equipment Manufacturing

100. Manufacturing of numerically controlled machine tools of high level and key spare parts: numerically controlled machine tools which exceed quintuple linkage, digital control coordinate spindle processing center, digital control coordinate grinding machine, digital control system which exceeds quintuple linkage and servomechanism installations, high-speed and super-strong knives for exact digital control manufacturing.

101. Manufacturing of multi-station forging forming machine of 1,000 or more tons

102. Manufacturing of equipments for breaking up and smashing retired cars and post-processing sorting equipment

103. Manufacturing of soft FTL product line

104. Manufacturing of vertical articulated industrial robots, welding robots and welding equipments thereof

105. Manufacturing of special processing machines: complete sets of laser cutting and welding equipments, exact processing laser equipments, digital-control and low-speed wire-cuts, submicron cracker

106. Manufacturing of wheel or crawler crane of 400 or more tons (~~limited to equity joint ventures or contractual joint ventures~~)

107. Designing and manufacturing of high pressure plunger pumps of working pressure  $\geq 35$  MPa and engine, designing and manufacturing of low-speed big torque engine of working pressure  $\geq 35$  MPa

108. Manufacturing of electro-hydraulic proportion servo elements of the integral hydraulic multi-channel valves with the working pressure  $\geq 25$  MPa

109. Designing and manufacturing of valve terminal, pneumatic solenoid valves of less than 0.35W and high-frequency electrical control valves of more than 200Hz

110. Designing and manufacturing of static hydrostatic drive device

111. Development and manufacturing of non-contacting gas film seal of pressure of more than 10MPa, dry gas seal of pressure of more than 10MPa (including experience device)

112. Development and manufacturing of macromolecule material device for automobiles (rub piece, changed phenol aldehyde plunger, non-metal liquid pressure mother pump and so on)

113. Manufacturing of car hub bearing of the third and **4<sup>higher</sup>** generation (~~function elements of boss axletree of flange and transducer inside or outside of the axletree, digital control, NC machine tool and processing centre bearing of high or mid class (the processing center shall have more than three axis interlocking function and 3-4 $\mu$ m repeated precision), high-speed wire or board rolling mill bearing (assistant axletree and roller axletree of single wire rolling mill of not less than 120m/s and of thin board~~)

~~rolling mill of not less than 2mm), high-speed railway bearing, (with speed of more than 200km/h), low-noise bearing of vibration of less than Z4(Z4, Z4P, V4, V4P), various bearings at level P4 and P2, bearings of wind power generators (mainshaft bearing, speed-up machine bearing and generator bearing of wind generating set of more than 2MW), and aviation bearing (mainshaft bearing of aircraft engine, landing gear bearing, transmission system bearing and handling system bearing)~~

114. Manufacturing of high-density, high-precision and shape-complicated powder metallurgy parts as well as chains for vehicles and engineering machinery

115. Manufacturing of gear transmissions for wind power and high-speed trains, propeller-controllable gear transmission system for vessels and large-size and heavy-load gear boxes

116. Production of high temperature resistant and insulation material (with F, H insulation class), as well as insulation shaped parts

117. Development and manufacturing of accumulator capsule and hydraulic & pneumatic rubber sealing

118. Manufacturing of high-precision and high-intensity (above 12.9-level), dysmorphism and combination fasteners

119. Manufacturing of micro precise transmission coupling parts (clutches)

120. Manufacturing of coupling shaft for heavy mill

121. Remanufacturing of mechanical equipment such as machine tools, engineering machinery and railway locomotive equipment as well as auto parts

122. Manufacturing of digital camera of 10 million pixels or above

123. Manufacturing of office machines: multi-functional integrated office equipment (copy, print, fax and scanning) and color-printing equipment, color-printing head and photosensitive drum with high resolution and precision of 2,400dpi and above

124. Manufacturing of motion picture machinery: 2k and 4k digital film projector, digital movie camera, digital image manufacture and edit equipment

#### **(XVIII) Special Equipment Manufacturing**

125. Manufacturing of mine trolley mining, loading and transporting device: mechanical drive tipper for mine of 200 or more tons, mobile crusher, wheeled digger of 5,000m<sup>3</sup>/h or above, loading machine for mine of 8 m<sup>3</sup> or above, electric driving mining machine of 2,500 kw or above and so on

126. Manufacturing of geophysical prospecting [\(excluding measurement of gravity and magnetic force\)](#) and logging equipment: MEME geophone, digital telemetry seismograph, digital imaging, computerized logging system, horizontal wells, directional wells, drilling rig equipment and apparatus, MWD logging while drilling

127. Manufacturing of oil exploration, drilling, gathering and transportation equipment: floating drilling systems and floating production systems which will work in water with depth of more than 1,500 meters, and supporting equipment for undersea oil production, collection and transportation

128. Manufacturing of large digging drilling with caliber of 2 or more meters and depth of 30 or more meters, manufacturing of push bench with diameter of 1.2 or more meters, manufacturing of large complete non-digging pipeline laying device with pulling power of 300 or more tons, and manufacturing of diaphragm wall drilling machine

129. Designing and manufacturing of large soil shifter of 520 hp or above

130. Designing and manufacturing of purge machine of 100m<sup>3</sup>/h or above, digging device with digging vessel of 1,000 or more tons

131. Designing and manufacturing for construction device of concrete diaphragm-proof wall for flood control dams

132. Manufacturing of machines for underwater mass: soil shifter, loader and digger under water with depth of not more than 9 meters

133. Manufacturing of devices of road bridge maintaining and automatic testing

134. Manufacturing of devices of road tunnel supervision, winding, disaster control and rescuing system

135. Designing and manufacturing of maintenance machinery for large-scale construction of railways, railway lines, bridges and tunnels, testing and monitoring equipments and key parts

136. Manufacturing of (asphalt) shingles equipment, galvanized steel and other metal roof production equipment

137. Manufacturing of spot spraying polyurethane waterproof thermal insulation system equipment which could protect environment and conserve energy, technology and equipment of polyurethane sealant paste preparation, technology and production equipment of modified silicone sealing paste preparation

138. Designing and manufacturing of high-precision strip mill (with thickness precision of 10 microns)

139. Manufacturing of selecting device for multi-element, fine-powder and hard-selecting mine

140. Manufacturing of key devices of 1,000,000 or more tons/year of oxene complete devices: complicated powder making machine of more than 400,000 tons/year, spiral discharging centrifuge with diameter of 1,000 or more millimeters, and small-flow and high-lift centrifugal pump

(17) Manufacturing of large complete devices of chemical processing of coal (limited to equity joint ventures or contractual joint ventures)

141. Designing and manufacturing of metal product moulds (such as extrusion moulds of pipe, stick and shape of copper, aluminum, titanium and zirconium)

142. Designing and manufacturing of punching mould of cover elements of automobile body, large-sized injection molds of fascia and fender-guard, and clamp and testing tools of automobile and motorcycle
143. Designing and manufacturing of special production equipment for car power battery
144. Designing and manufacturing of precision mold (the precision of punching mould is more than 0.02 millimeter and that of cavity mould is more than 0.05 millimeter)
145. Designing and manufacturing of non-metal product moulds
146. Manufacturing of beer filling device of 60,000 bottles/h or above, drink mid or high hot filling device of 50,000 bottles/h, asepticism filling device of 36,000 bottles/h or above
147. Manufacturing of producing technologies and key equipments for aminophenol, enzyme, food additive and so on
148. Manufacturing of complete feed processing equipment of 10tons/h or above and key parts thereof
149. Manufacturing of light board and box device of 0.75-millimeter high or less
150. Manufacturing of single sheet-fed multi-colored offset printing presses (with the breadth of 750 or more millimeters, printing speed of 1,6000 or more sheets per hour in single multi-colored sheet and 1,3000 or more sheets per hour in double multi-colored sheet)
151. Manufacturing of single roll lithographic printing machine with speed of more than 75,000 pages in folio/h (787×880 millimeters), diprosopia single roll lithographic printing machine with speed of more than 170,000 pages in folio/h (787×880 millimeters) and the commercial roll paper offset press with the printing speed of more than 50,000 pages in folio/h (787×880 millimeters)
152. Manufacturing of multi-colored breadth flexographic press (with the printing breadth of 1,300 or more millimeters and printing speed of 350 or more meters per second), and the injection digital printing press (for publishing: printing speed of 150 or more meters per minute and resolution ratio of 600dpi or above; for packaging: printing speed of 30 or more meters per minute and resolution ratio of 1,000dpi or above; for changeable data: printing speed of 100 or more meters per minute and resolution of 300dpi or above)
153. Manufacturing of computer mass color pre-coordination systems, mass color remote handling systems, mass speed following systems, prints quality automatic testing and following systems, no-axis turning technologies, high-speed automatic splicer with the speed of 75,000 pieces per hour, paper feeder, and high-speed and automatic remote handling paper folding machine, automatic overprinting system, cooling device, silanion putting system, bias-adjusting device and so on
154. Manufacturing of electronic-gun automatic coating machine
155. Deep processing technique and equipment manufacturing of plate glass
156. Manufacturing of complete set of new type of paper (including pulp) making machines

157. Manufacturing of equipment with new technique for post ornament and processing of leather

158. Development and Manufacturing of new agriculture processing and storage equipment: new equipment for the processing, storage, preservation, classifying, packing, and drying of food, oil, vegetables, dried fruits and fresh fruits, meat and aqua-products; agricultural product quality testing equipment; the quality detection equipment of agricultural products' damage; rheometer; farinograph; ultrafine pulverization equipment; highly efficient dewatering equipment; 5-grade plus high efficient fruit juice condensation equipment; equipment for disinfection of powder food in media; aseptic packaging equipment for semi-solid and solid food; disc-type separation centrifuges

159. Manufacturing of agricultural machinery: agricultural facility (greenhouse automatic irrigation equipment, auto-control configuration and fertilization equipment of nutritious liquid, efficient vegetable nursery equipment, soil nutrient analysis instruments), tractor and associated farm tools with 120 kilowatts and above matching engine power, low fuel consumption, low noise and low-emission diesel engine, spray machines with residual fog tablets recovery unit matching with large tractor, high-performance rice transplanter, cotton harvesting machine& platform, self-moving maize reaping machine adapting to a variety of row-spacing (hydraulic or mechanical drive), [peanut harvesting machine](#), rapeseed harvesting machine, cane cutting machine and complete beet harvester

160. Manufacturing of new technical forestry equipment

161. Manufacturing of equipment for collecting, bundling and comprehensive utilization of crop straw

162. Manufacturing of equipment for resource utilization of waste agriculture products and waste fowl and livestock products which are bred in scale

163. Manufacturing of fertilizer, pesticide, water-saving agricultural technical equipment

164. Manufacturing of cleaning equipment for electromechanical wells and equipments for laundering drug production

165. Manufacturing of electronic endoscopes

166. Manufacturing of fundus cameras

167. Manufacturing of key components of medical imaging equipments (high magnetic field intensity and superconducting magnetic resonance imaging equipment, X-ray digital tomography imaging equipment, and digital color ultrasonic diagnostic equipment)

168. Manufacturing of Medical Ultrasonic Transducer (3D)

169. Manufacturing of boron neutron capture therapy equipments

170. Manufacturing of image-guiding intensity-modulated radiation treatment system

171. Manufacturing of Hemodialysis, Blood Filter

~~(49) Manufacturing of equipment for automatic enzyme immune system (including the functions of application of sample, elisa photo meter, wash plate, incubation, data, post treatment, etc.)~~

[172. Manufacturing of full-automatic biochemical monitoring equipment, blood cells analyzer with five classifications, full-automatic chemiluminescence immune analyzer and high-throughput DNA sequencing system](#)

173. New techniques of quality control of medicine products and new equipment manufacturing

174. New analytical techniques and extraction technologies, and equipment development and manufacturing for the effective parts of national medicines

175. Manufacturing of multi-layer co-extrusion water-cooled film mold-blowing equipment for non-PVC infusion bags for medical use

176. Development and Manufacturing of equipment of new type of knitting machines, key parts and textile testing, laboratory equipment

177. Manufacturing of computer Jacquard artificial fur machine

178. Manufacturing of special equipments for solar cell production

179. Manufacturing of equipment for prevention and treatment of air pollution: equipment for high temperature-resistant and corrosion-resistant filter materials, low NOx combustion equipment, complete equipment for fuel gas denitrification catalysts and denitrification, equipment for industrial organic waste gas purification, equipment for diesel vehicle ventilation purification, and equipment for exhaust treatment of heavy metal

180. Manufacturing of equipment for prevention and treatment of water pollution: horizontal spiral centrifugal machine, film and film materials, ozone generator of 50kg/h or above, chlorine dioxide generator of 10kg/h or above, ultraviolet disinfection device, small sewage treatment equipment in the rural areas, and treatment equipment for waste water with heavy metal

181. Manufacturing of equipment for treatment of solid waste: equipment for sludge treatment and resource utilization at the sewage treatment plant, complete equipment for waste incineration with daily treatment of more than 500 tons, technical equipment for landfill leachate treatment, leakage-proof geomembrane at the landfill field, equipment for construction waste and resource utilization, equipment for dangerous waste treatment, methane gas power generation device at the landfill field, equipment for treatment of iron and steel scrap, and equipment for polluted soil remediation

182. Development and manufacturing of equipment for comprehensive utilization of red mud in the aluminum industry

183. Manufacturing of equipment of comprehensive utilization of tailings

184. Manufacturing of waste plastics, electronics, rubber, battery recycling equipments

185. Manufacturing of equipment for recycling treatment of waste textiles

186. Manufacturing of the remanufacturing equipment of used mechanical and electronic products

187. Manufacturing of equipment for comprehensive utilization of scrap tires
188. Environmental protection technology and equipment manufacturing of aquatic ecosystem
189. Manufacturing of movable combination water purification equipment
190. Unconventional water treatment and repeated utilization equipment, and water quality monitoring instrument
191. Leak-testing equipment and instrument of industrial water pipe network and device (apparatus)
192. Development and manufacturing of 100,000 cubic meters and above daily production seawater desalination and recycling cooling technology and complete sets of equipments
193. Manufacturing of special meteorological observation and analysis equipments
194. Development of seismic station, seismic network, and mobile seismological observation technology system, and manufacturing of equipments
195. Manufacturing of ~~three~~four-drum (and above) radial tire building machines
196. Manufacturing of rolling resistance testing machine and tire noise lab
197. Manufacturing of new heating measurement and temperature control device technical equipments
198. Manufacturing of preparation, storage and transportation equipment and inspection systems of hydrogen energy
199. Manufacturing of new heavy residue gasification atomization nozzle, steam leakage rate of 0.5 percent and below efficient steam traps, 1,000 °C and above high-temperature ceramic heat exchanger manufacturer
200. Manufacturing of equipment for marine oil-spilling recovery
201. Manufacturing of low-density coal gas and ventilation air utilization device
202. Development and utilization of clean-coal technical product and equipment manufacturing (coal gasification, coal liquefaction, water-coal, industrial briquette)
- [203. Technical development and equipment manufacture for fire-fighting and rescue of large public buildings, high-rise buildings, petrochemical facilities, forest, hill, water area and underground facilities](#)
- ~~(XIX) Communication and Transportation Equipment Industries~~ [Automobile Manufacturing](#)
204. Manufacturing of automobile engine, and construction of engine research and development organization: gasoline motor with output per liter not lower than 70 kw, diesel motor with output per liter not lower than 50 kw and discharge capacity below 3 liters, diesel motor with output per liter not



lower than 40 kw and discharge capacity above 3 liters, motor driven by such new resources as fuel cells and compound fuel

205. Manufacturing of key auto parts and development of key technology: DCT, [CVT](#), AMT, gasoline engine turbocharger, viscous even shaft device (for four-wheel drive), automatic transmission actuator (magnetic valve), hydrodynamic retarder, eddy current brake, gas generator for SRS, common rail fuel injection technology (with maximum injection pressure of more than 2,000pa), VGT, VNT, engine emission control device up to the standard for the V stage of China, ITM and coupler assembly, steer-by-wire system, diesel particles trap, special vehicle bridge for large low-floor passenger cars, absorption steering system, large-and-medium frequency air condition system for passenger cars, special rubber parts for vehicles, as well as key parts and components of the above-mentioned parts

206. Production as well as research and development of automobile electronic devices: engine and under-chassis control system as well as key spare parts, in-vehicle electronic technology (automobile communication system and navigation system), automobile electronic network technology (limited to equity joint ventures), components for the input (sensor and sampling system) and the output (actuator) of electronic control system, EPS electronic controller (limited to equity joint ventures), embedded electronic integration system (~~limited to equity joint ventures or contractual joint ventures~~), electronic-controlled air suspension, ECS, electronic valve system equipment, EIC, ABS/TCS/ESP system, BBW, TCU, TPMS, OBD, IMMO, ABICAS, and testing system for testing and maintenance of autos and motorbikes

207. Manufacturing of key parts and components for new energy vehicles: energy power battery (energy density of 110Wh/kg or above, cycle life of 2,000 or more times, and foreign investment proportion of not more than 50%), positive materials of battery (specific capacity of 150mAh/g or above, cycle life of 2,000 times which is not less than 80% of the initial discharging capacity), battery separator (with thickness of 15-40μm and porosity of 40%-60%); battery management system, motor management system, electronic integration of electric cars; drive motor for electric cars (peak power density of 2.5kW/kg or above, high efficient area: 65%, and working efficiency of 80% or above), DC/DC for vehicles (input voltage of 100V-400V), high power electronics (IGBT, voltage level of 600V or above and current of 300A or above); and plug-in hybrid electromechanical coupling drive system.

#### [\(XX\) Manufacturing Industry of Railroads, Ships, Aerospace and Other Transportation Equipment](#)

208. Manufacturing of ~~key parts and components for~~ [engine emission control device](#) of high-emission (with emission of more than 250 ml) motorcycles: ~~technology of electrical control fuel injection for motorcycle (limited to equity joint ventures or cooperative joint ventures), and engine discharging device~~ meeting motorcycle pollutant discharging criteria (stage III) of China.

209. Equipment for railway transportation (limited to equity joint ventures or contractual joint ventures) ~~→ research and development, design as well as manufacturing of complete train and key spare parts (drive system, control system, brake system) of rapid transit railway, railway of passenger special line, intercity railway, trunk railway and equipment for urban railway transportation; research and development, design as well as manufacturing of passenger service facilities and equipment for rapid transit railway, railway of passenger special line, intercity railway and urban railway transportation; design as well as research and development of related information system in the process of construction~~

~~of information age, research and development, design as well as manufacturing of railway and bridge facilities and equipments for rapid transit railway, railway of passenger special line, intercity railway, manufacturing of equipment and fixtures for electrical railway, research and development of technologies for controlling railway noise and vibrating, manufacturing of discharging equipment for trains, manufacturing of safety monitoring equipment for railway transportation~~

210. Design, manufacturing and maintaining of civil plane: those of trunk and branch lines (Chinese part shall hold the majority of shares), general ones (limited to equity joint ventures or contractual joint ventures)

211. Production and maintaining of spares parts for civil planes

212. Designing and manufacturing of civil helicopters (for those of 3 or more tons, the Chinese part shall hold the majority of shares, ~~those of less than three tons (limited to equity joint ventures or contractual joint ventures)~~)

213. Production of spares parts for civil helicopters

214. Manufacturing of ground and water effect plane, and designing and manufacturing of no-people plane and aerostat (Chinese part shall hold the majority of shares)

215. Design, manufacturing and maintaining of plan engines and spare parts as well as air assistant power systems ~~(limited to equity joint ventures or contractual joint ventures)~~

216. Designing and manufacturing of civil air-borne equipment ~~(limited to equity joint ventures or contractual joint ventures)~~

217. Manufacturing of flight ground equipments: civil airfield facilities, support equipment for civil airfield work, ground equipment for flight test, equipment for flight simulation and practice, equipment for aeronautic testing and measuring, equipment for aeronautic ground testing, comprehensive testing equipment for machines, special equipment for aeronautic manufacturing, equipment for pilot manufacturing aeronautic materials, ground receiving and applying equipment for civil aircraft, ground testing equipment for rocket launcher, equipment for dynamic and environmental experience for rocket launcher

218. Manufacturing of mechanical and electrical products for aircrafts, temperature control products for aircrafts, test equipment for planet products and structure and organization products for aircrafts

219. Manufacturing of light gas-turbine engine

220. Designing of luxury cruise and deep-water (more than 3,000 meters deep) marine engineering equipment of luxury cruise ~~(limited to equity joint ventures or contractual joint ventures)~~

221. Manufacturing and maintenance of marine engineering equipment (including modules) (Chinese part shall hold the majority of shares)

222. Designing of low-and-medium-speed diesels and their parts for vessels ~~(limited to equity joint ventures or contractual joint ventures)~~

223. Manufacturing of crankshafts of low and mid speed for diesel engine for vessels (Chinese part shall hold the majority of shares)

224. Designing and manufacturing of stateroom machine for vessels ~~(Chinese part shall hold the relative majority of shares)~~

225. Designing and manufacturing of communication and directing systems for vessels: communication systems, electronic directing equipment, vessel radar, electric compass automatic pilot, public broadcasting systems inside vessels and so on

226. Designing and manufacturing of cabin cruiser ~~(limited to equity joint ventures or contractual joint ventures)~~

#### (XXI) Electric Machinery and Equipment Industries

227. Manufacturing of pivotal equipment of super-critical units of over 1,000,000KW of fire and electricity set ~~(limited to equity joint ventures and cooperative joint ventures)~~; safety valve and adjustment valve

228. Manufacturing of the denitration technical equipment for sintering machine at the coal-burning power plant and the steel industry

229. Designing and manufacturing of equipment of fire-electricity airproof

230. Manufacturing of heavy casting and forging equipment for coal-burning power plant and hydroelectric power station

231. Manufacturing of key auxiliary equipment for hydro-power generating units

232. Manufacturing of power transmitting and transforming equipment ~~(limited to equity joint ventures and cooperative joint ventures): amorphous alloy transformer, operational mechanism for the switch of 500KV or above, arc control device, large tube insulator (more than 1000KV and 50 KA), outlet device for transformer of more than 500 KV, sleeve (alternating current of 500, 750 and 1000KV, and direct current of 14 size), tap changer (alternating current 500, 750 and 1,000 KV on load and offload tap changer), dry PKG for the transmission of direct current, converter valve for the transmission of direct current of  $\pm 800KV$  (water-cooled equipment and direct current field equipment), electrical contactor materials in line with EU RoHS instructions and welding materials with Pb and Cd.~~

233. Manufacturing of new energy electricity-power complete equipment or key equipment: photovoltaic power, geothermal power generation, tidal power generation, wave power generation, rubbish power generation, methane power generation, wind power generation equipment of over 2.5MW

234. Manufacturing of large pumped-storage aggregate with the nominal power of 350MW or above ~~(limited to equity joint ventures and cooperative joint ventures)~~; pump turbine and speed controller,

large speed-variable reversible pump turbines, generator motor and such accessory equipment as excitation and starting device

235. Manufacturing of stirling generating set

236. Development and manufacturing of straight linear and planar motor and drive system

237. Manufacturing of hi-tech green battery: lithium battery power, zinc nickel storage battery, zinc-silver accumulator, lithium ion battery, solar battery, fuel cell and so on (except energy power battery for new energy vehicles)

238. Manufacturing of refrigeration air conditioning compressor with motor adopting DC variable frequency technology, refrigeration air conditioning compressor adopting CO<sub>2</sub> natural medium and refrigeration air conditioning equipment with renewable energy (air, water and ground source)

239. Manufacturing of solar air conditioning, heating system, solar dryer

240. Manufacturing of biomass drying pyrolysis system, biomass, gasification unit

241. Manufacturing of ac-fm voltage regulation drawbar

#### **(XXII) Computer, Communication and Other Electronic Equipment Manufacturing**

242. Manufacturing of Hd camcorders and digital sound-playing equipment

243. Manufacturing of flat panel display such as TFT-LCD, PDP and OLED and the material of flat panel display (except TFT-LCD glass base plate of the sixth-generation or below)

244. Manufacturing of such parts as optical engine, light source, projection screen, high-resolution projection tube and LCOS module used in large screen color projection display

245. Manufacturing of digital audio and visual coding or decoding equipment, digital broadcasting TV studio equipment, digital cable TV system equipment, digital audio broadcast transmission equipment, digital television converter, digital television broadcasting Single Frequency Network (SFN), and satellite digital TV up-linking station, ~~front-end equipment manufacturing of SMATV~~

246. Designing of integrated circuit, and large-scale manufacturing of digital integrated circuit with its wire width of not more than ~~0.18 micron~~28 nanometer, manufacturing of simulated and digital analogy integrated circuit of not more than 0.811 micron and the encapsulation, manufacturing of MEMS and compound semiconductor integrated circuit as well as advanced packaging technologies (such as BGA, PGA, CSP, MCM) and test)

247. Manufacturing of large and medium-sized computer, high-performance computer with its operation of 10,000 trillion times, portable micro computer, ~~high-rank server with its operation of not less than 1 trillion times per second~~, large-scale simulated system, large industrial control machine and the controller

248. Manufacturing of computer digital signal process system and board card

249. Manufacturing of figure and image recognition process system

250. Development and manufacturing of large-capability optical and disk driver

251. Manufacturing of high-speed storage system and intelligent storage equipment with its capability of not less than 100 TB

252. Manufacturing of computer aided design (three-dimensional CAD), [electronic design automation \(EDA\)](#), computer assisted testing (CAT), computer aided manufacture (CAM), computer aided engineering (CAE) and other computer application systems

253. Development and manufacturing of software product

254. Development and manufacturing of specialized electronic material (except the development and manufacturing of optical fiber perform rod)

255. Manufacturing of specialized equipment, testing equipment, tools and moulds

256. Manufacturing of new type electronic components and parts: slice components, sensitive components and sensors, frequency monitoring and selecting components, mix integrated circuit, electrical and electronic components, photoelectric components, new type components for machinery and electronics, polymer solid electrolytic capacitor, super-capacitors, integrated passive components, high-density interlinked build-up board, multilayer flexible board, flexible printing circuit board and packaging substrate

257. Manufacturing of touch-control system (touch screen and touch components)

258. Manufacturing of high-brightness LED with its luminous efficiency of more than ~~100lm~~[140lm](#)/W, epitaxial slice LED(blue) with its luminous efficiency of more than ~~100lm~~[140lm](#)/W, and white luminous tube with luminous efficiency of more than ~~100lm~~[140lm](#)/W and its power of more than 200mW

259. Development and manufacturing of key components and parts used in high-precision digital CD drive

260. ~~Reproduction of read-only compact disk and~~ Manufacturing of recordable compact disk

261. Design and manufacturing of civil satellites ~~(Chinese partner shall hold the majority of shares)~~

261. manufacturing of civil satellites effective payload (Chinese partner shall hold the majority of shares)

262. Manufacturing of spare parts for civil satellites

263. Manufacturing of telecommunication system equipment for satellites

~~(24) Manufacturing of receiving equipment of satellite navigation and key components~~

264. Manufacturing of optical communication measuring instrument and light transceiver with its speed of not less than ~~10Gb~~[40Gb/s](#)

265. Ultra Broad Band (UWB) communication equipment manufacture

266. Manufacturing of wireless Local Area Network (including supporting WAPI) and Wide Area Network

267. Manufacturing of TDM of ~~40Gbps~~[100Gbps](#) or above, DWDM, broad band passive network equipment (including EPON, GPON and WDM-PON), next generation DSL chip and equipment, OXC, ASON, and optical fiber transmission equipment of 40G/sSDH or above

268. Development and manufacturing of system equipment, terminal equipment, test equipment, software and chips on the basis of the next-generation internet equipment of IPv6

269. Development and manufacturing of the third-generation and following-up mobile communication cell phones, base station, core network equipment and network testing equipment

270. Development and manufacturing of high-end router, and network switcher of more than 1 kilomega

271. Manufacturing of air traffic control system equipment ~~(limited to joint venture and cooperation)~~

[272. Development and manufacturing of electronic auxiliary teaching equipment of traditional Chinese medicine based on computer information technology \(involving sound, light, electronics and touch\), and equipment of virtual pathological and physical model.](#)

#### **(XXIII) Machinery Industries for Instrument and Meter, ~~Culture and Office~~**

273. Manufacturing of automatic control system and device in the industrial process: FCS, PLC, two phase flow meter, solid flow meter, new sensors and field measurement instrument

274. Development and manufacturing of large-scale sophisticated instruments: ~~electron microscope, laser scanning microscope, scanning tunneling microscope, electronic probe, large metallurgical microscope, photo-electric direct reading spectrometer, Raman spectrometer, mass spectrograph, GC/MS spectrometer, nuclear magnetic resonance spectrometer, energy dispersive analysis system, X-ray fluorescence spectrometer, diffraction analysis system, industrial CT, 450KV industrial X-Ray defect defector, large-scale balance measuring machine, automatic testing system of on-line mechanical quality, three-coordinate measuring machine, laser comparator, electrical prospecting instrument, airborne electrical prospecting and gamma-ray spectrometry measuring instrument of more than 500 m, borehole gravimeter and 3-dimensional magnetograph, high-precision microgal and aviation gravity gradiometer, aviation gravity gradient measurement instrument, linear scale and coder~~

275. Manufacturing of high-precision digital voltmeter, current meter (with measuring range of seven bit and a half and above)

276. Wattless power manufacturing of automatic compensation equipment

277. Manufacturing of new equipment for safe production

278. VXI bus-type automatic test system (in accordance with IEEE1155 international standards)

279. Development and manufacture comprehensive management system for under-mine monitoring and disaster-forecasting apparatus and coal safety measurement

280. Manufacturing of the equipment for engineering measurement and global geographical observation equipment: digital triangle surveying system, Digital programmed system for three-dimensional topography model (acreage>1000×1000mm, horizontal error<1mm, altitude error<0.5mm), ultra wideband seismograph( $\phi$ <5cm, frequency band0.01-50HZ, equivalent quaking speed noise<10-9m/s), integrated earthquake data processing system, extensive under well earthquake and auspice observation apparatus, sophisticated controllable epicenter system, engineering velocity measuring system, high-precision GPS receiver (precision 1mm + 1ppmm), INSAR graphics receiving and processing system, absolute gravimeter with the precision of less than 1 microgal, satellite gravimeter, Doppler weather radar adopting coherent technology or double polarization technology, visibility measuring apparatus, meteorological sensor, (including temperature, pressure, humidity, wind, precipitation, cloud, visibility, radiation, frozen earth, depth of snow), anti lightning stroke system, multilevel soot and dust sampler, three-dimension supersonic anemoscope, high-precision intelligent total station machine, three-dimensional laser scanner, high-performance diamond-bit used for drilling, laser rangefinder without cooperative target, wind profiler(affixed with RASS),—GPS electronic probe system, CO<sub>2</sub>/H<sub>2</sub>O general observation system, boundary layer laser doppler radar, granule chromatography, (3nm-20 $\mu$ m), high-performance data collector, and under-water glider

281. Manufacturing of environment motoring apparatus: SO<sub>2</sub> automatic sampler and calcimeter, NO<sub>x</sub>, NO<sub>2</sub> automatic sampler and calcimeter, O<sub>3</sub> automatic monitor, CO automatic monitor, automatic sampler and calcimeter for soot and Pm<sub>2.5</sub> dust, portable calcimeter for harmful and toxic gas, automatic analyzer for organic pollutants in the air, COD automatic online monitor, BOD automatic online monitor, automatic online monitor for turbidity, DO automatic online monitor, TOC automatic online monitor, automatic online monitor for ammonia nitrogen, radiation dose monitor, ray analyzer, online monitoring equipment of heavy metal, water quality pre-warning monitoring equipment of online bio-toxicity

282. Manufacturing of instrument and equipment for hydrological data collecting, processing, transmitting and flood warning

283. Manufacturing of ocean exploring apparatus and equipment: deep-sea underwater video camera and underwater camera, multi-beam explorer, shallow and deeper subbottom profiler, navigation warm-salt profiler, fluxgate compass, hydraulic wire-line winch, underwater airproof electronic connector, energy recycle device used in filtration-proof seawater desalination with its efficiency of higher than 90%, Marine ecosystem inspection buoy, section probing buoy, disposable measuring instrument of electrical conductivity, temperature and depth (XCTD), on-the-spot water quality measuring apparatus, intelligent chemical transducer for measuring the water quality of the ocean (continues work for 3-6 months), electromagnetic current meter sensor, navigating acoustic-Doppler current profiler(self-contained, direct-read, used in-ship), electricity conductivity rate deep-section profiler, acoustic responding emancipator(set deep into the ocean)

**(XXIV) ~~Handicraft and Other Manufacturing Industries~~ Industry of Comprehensive Utilization of Waste Resources**

284. Coal ore dressing by washing and comprehensive utilization of powered coal (including desulphurized plaster), coal gangue
285. Production of all biodegradable material
286. Recovery processing of waste electrical and electronic products, autos, electromechanical devices, rubber, metal and batteries

**IV. Production and Supply of Power, Heating Power, Gas and Water**

287. Construction and operation of power station with stand-alone 600,000 kilowatts and above supercritical unit ~~by employing the clean fuel technology of integral gasification combined circulation (IGCC), circulating fluidized bed of not less than 0.3 million kw, Pressurized Fluidized Bed Combustion Combined Cycle (PFBC) of not less than 0.1 million kw~~
288. Construction and operation of power station by employing back pressure (extraction type) combined heat - power generation, combined heating-power-cooling generation, and 300,000 kilowatts and above cogeneration unit
289. Construction and operation of power station with stand-alone 600,000 kilowatts and above large air cooling unit in water-deficient area
290. Construction and operation of clean coal power generation project such as integral gasification combined circulation power generation
291. Construction and operation of power generating project of stand-alone 300,000 kilowatts and above by employing fluidized bed boiler and using coal gangue, middings and coal slime
292. Construction and management of hydropower stations with the main purpose of power generating
293. Construction and management of nuclear-power plants (Chinese partner shall hold the majority of shares)
294. Construction and management of new energy power plants (including solar energy, wind energy, magnetic energy, geothermal energy, tide energy and biological mass energy, etc.)
295. Construction and management of power grid (the Chinese part shall hold the majority of shares)
296. Utilization of sea water (direct use of sea water, and seawater desalinization)

**Comment [Author4]:** The Chinese (official) version of the 2015 Catalogue says "tide energy, current energy, wave energy," but the latter two are missing in this English translation.

That there was also a discrepancy between the Chinese (official) version and English translation of the 2011 Catalogue. The Chinese version of the 2011 Catalogue included "tide energy, wave energy" here but the English translation omitted "wave energy."

The only change between the 2011 and 2015 Chinese (official) versions of the Catalogue is the addition of "current energy."

**Comment [Author5]:** The 2015 Catalogue moves this item from the restricted list to the encouraged list (here).

Note also that the English translation here uses the term "power grid" while the English translation of the 2011 Catalogue used the term "power network." The Chinese (official) term used for both (电网) has not been changed.



- 297. Construction and operation of urban water-supply plant
- 298. Construction and operation of renewable water plant
- 299. Construction and operation of sewage treatment plant
- 300. Construction and operation of charging stations of motor vehicles and battery replacement stations

## V. Communication and Transportation, Storage, Post and Telecommunication Services

- 301. Construction and management of grid of national trunk railways (Chinese partner shall hold the majority of shares)
- 302. Construction and management of [intercity railway, urban \(rural\) railway, resource-based development railway, and](#) branch railways and related bridges, tunnels, ferry and station facilities ~~(limited to equity joint ventures or contractual joint ventures)~~
- 303. Comprehensive maintenance of infrastructure of high-speed railway, special railway line, intercity railway ~~(Chinese partner shall hold the majority of shares)~~
- 304. Construction and management of highways, independent bridges and tunnels
- 305. Road freight transportation companies
- 306. Construction and management of public dock facilities of ports
- 307. Construction and management of civil airports (Chinese partner shall hold the relative majority of shares)
- 308. Air transportation companies (Chinese partner shall hold the majority of shares, [and investment proportion of a foreign company and its affiliated enterprises should not be more than 25%](#))
- 309. General aviation companies for agriculture, forest and fishery (limited to equity joint ventures or contractual joint ventures)
- 310. Scheduled and non-scheduled international maritime transportation business ~~(the Chinese party shall hold the relative majority of shares)~~ [\(limited to equity joint ventures or contractual joint ventures\)](#)
- 311. International containers inter-model transportation
- 312. Construction and management of oil (gas) pipelines, oil (gas) depots and petroleum wharf
- 313. Construction and management of the facilities of coal delivery pipelines
- 314. Construction and management of automatic elevated three-dimensional storage facilities and storage facilities relating to ~~transportation services~~ [packaging, processing and distribution business](#)

## VI. Wholesale and Retail Trade Industry

315. Joint distribution of general goods, logistics and related technical services such as low-temperature distribution of fresh agricultural products [and special drugs](#)

316. Chain distribution in rural areas

317. Construction and operation of stock and container unit sharing system

## VII. Rent and Business Service

318. Accounting and auditing (~~limited to equity joint ventures or contractual joint ventures~~ [chief partner needs to have Chinese nationality](#))

319. Information consulting service of international economy, science and technology, environmental protection and logistics

320. Engaged in such information technology and business flow outsourcing services as system application management and maintenance, information technology supportive management, bank background service, financial settlement, ~~human resource service~~, software development, offshore call center, data processing by means of accepting service outsourcing

321. Venture investment enterprises

322. Intellectual property services

323. Domestic service

## VIII. Scientific Research and Technical Services ~~and Geological Exploration~~

324. Biological engineering and bio-medical engineering technique and development technique of biomass energy

325. Isotope, irradiation and laser technique

326. Sea development and sea energy development technology, comprehensive technology of sea chemical resources, development of the relevant products and deep-processing technology, sea medicine and biochemical product development technology

327. Marine monitoring technology (sea tidal wave, meteorology, environmental monitoring), sea bed probing, exploration and evaluation technology of ocean resource

328. Comprehensive use of high additional value technology of seawater chemical resources to distill potassium, bromine, magnesium and lithium from dense sea water after desalinization and its deep processing

329. Technology of marine oil pollution clearing and ecological restoration, and development of related products, prevention and treatment technology of eutrophication of sea water, prevention and treatment technology of marine biological explosive growth disasters, and restoration technology of ecological environmental in the coastal zone

330. Development and service of energy-saving technology

331. Technology for recycling and comprehensive utilization of resource, development and application of the recycling technology of the waste dispelled by enterprises

332. Technology for environment pollution treatment and monitoring

333. Energy-saving and consumption-reduction in chemical fiber production and printing and dyeing and the new technology to deal with polluted air, water and solid waste

334. Technology for preventing from desertification and desert improvement

335. Comprehensive management technology for balancing grass and domestic animal

336. Application technique of civil satellite

337. Research and development centers

338. Incubator for hi-tech, new products developing, and incubation of enterprises

[339. Development and application of Internet technology](#)

[340. Creative industries like industrial design, architecture design and costume design](#)

## IX. Water, Environment and Public Facility Management Industry

341. Construction and management of key water control projects for comprehensive utilization (Chinese partner shall hold the relative majority of shares)

342. Construction and management of urban access-controlled roads

343. Construction and management of metro and city light rail (~~Chinese partner shall hold the majority of shares~~)

344. Construction and management of treatment plants for garbage, the dangerous wastes (incineration and landfill), and the facilities of environment pollution treatment

## X. Education

~~1. Advanced educational institution (only limited to joint venture or cooperative)~~

**Comment [Author6]:** The Chinese (official) version of the 2015 Catalogue added the term "environmentally-friendly" after "energy-saving." This change from the 2011 Catalogue is not reflected in this English translation.

**Comment [Author7]:** The 2015 Catalogue moves this item from the encouraged list (here) to the restricted list.

Also, the English translation of the 2015 Catalogue uses the term "higher education institutions" while the English translation of the 2011 Catalogue used the term "advanced educational institutions." The official Chinese term used has not changed (高等教育机构).

345. Vocational ~~skills~~-training [institutions for non-educational system class](#)

#### **XI. Public Health, ~~Social Security~~ and Social ~~Welfare~~[Work](#)**

346. Service agencies for the elderly, the handicapped and children

[347. Retirement organization](#)

#### **XII. Culture, Sports and Entertainment**

348. Operation of the performance site (~~the Chinese party shall hold the relative majority of shares~~)

349. Operation of sports facilities, fitness, competition performance, sports training and agency service

## Catalogue of Restricted Foreign Investment Industries

### I. Farming, Forestry, Animal Husbandry and Fishery Industries

1. Breeding and seeds developing production of new train crop breed (Chinese party shall hold the majority of shares)

~~2. Processing of the logs of precious varieties of trees (limited to equity joint ventures or contractual joint ventures)~~

~~3. Cotton (raw cotton) processing~~

### II. Mining Industries

2. Exploring and mining of special and scarce coals (Chinese partner shall hold the majority of shares)

~~2. Exploring and mining of barite (limited to equity joint ventures or contractual joint ventures)~~

3. Exploring and mining of precious metals (gold, silver, platinum families)

~~4. Exploring and mining of important nonmetallic ores of diamond, high aluminum refractory clay, wollastonite and plumbago~~

~~5. Exploring and cradling of phosphorite, lithium and iron pyrite, and extraction of brine resource in salt lakes~~

~~6. Mining of szaibelyite and szaibelyite iron ores~~

~~7. Mining of Celestine~~

~~8. Mining of Ocean Manganese Nodule (Chinese partner shall hold the majority of shares)~~

### III. Manufacturing Industries

#### ~~1. Farming Subsidiary Foodstuff Industry~~

~~6. Processing of edible oil of soybean, rapeseed, peanut, cottonseed, tea seed, sunflower seed and palm (Chinese partner shall hold the majority of shares), processing of rice, flour [and raw sugar](#) and deep-processing of corn~~

~~7. Manufacturing of biology liquid fuel (fuel ethanol and bio-diesel) (Chinese partner shall hold the majority of shares)~~

## **2. Beverage Manufacturing Industries**

{1}Manufacturing of rice wine and quality liquor (Chinese partner shall hold the majority of shares)

## **3. Tobacco Industries**

{1}Manufacturing of threshing and curl tobacco leaf

## **4. Printing and Copy of Recording Vehicle**

8. Print of publication (Chinese partner shall hold the majority of shares)

## **5. Petroleum Processing, Coking and nuclear fuel processing Industries**

{1} Oil refining of not more than 10 million tons per year under the normal pressure, catalytic cracking of not more than 1.50 million tons per year, continuous reforming of not more than 1 million tons per year (including aromatics extraction) and hydrocracking manufacturing of not more than 1.5 million tons per year

## **6. Chemical Raw Material Products Manufacturing Industry**

{1}Manufacturing of sodium carbonate and caustic soda as well as sulfuric acid, hydrogen acid and potash below the designated size or with the backward technology

{2}Production of sensitive materials

{3}Production of benzidine

{4}Production of chemical products from which narcotics are easily made (ephedrine, 3, 4 idene dihydro phenyl 2 acetone, phenylacetic acid, 1 phenyl 2 acetone, heliotropin, safrole, isosafrole, acetic oxide)

{5}Manufacturing of low end HCFC of hydrogen fluoride

{6}Production of divinyl rubber (except cis rich poly butadiene rubber), emulsion polymerization buna S, thermoplastics buna S

{7}Production of PVC with the acetylene method, ethene below the designated scale and post processing products

{8}Production of paints and coatings with harmful matter and backward technology and below the designated scale

{9}Processing of ludwigite

~~{10}Production of inorganic salt characterized by large occupation of resource, serious environmental pollution and application of backward technology~~

#### **7. Medical and Pharmaceutical Products Industry**

~~{1}Production of chloramphenicol, penicillin G, lincomycin, gentamicin, dihydrostreptomycin, amikacin, tetracycline hydrochloride, oxytetracycline, medemycin, kitasamycin, ilotyin, ciprofloxacin and ofloxacin~~

~~{2}Production of analgin, paracetamol, Vitamin B1, Vitamin B2, Vitamin C, Vitamin E~~

~~{3}Production of vaccine varieties included in the state immunization program~~

~~{4}Production of material medicines for addiction narcotic and A class psychoactive drug (Chinese partner shall hold the majority of shares)~~

~~{5}Production of blood products~~

#### **8. Chemical Fiber Production Industry**

~~{1}Production of chemical fiber drawnwork of conventional chipper~~

~~{2}Production of rayon staple viscose fiber~~

#### **9. Non-Ferrous Metal Smelting and Rolling Processing Industry**

9. Non-ferrous metal refining of tungsten, molybdenum, stannum (except tin compounds), antimony (including antimony oxide and antimony sulphide)

~~{2}Non-ferrous metal refining of electrolytic aluminium, copper, lead, zinc and another non-ferrous metal~~

10. Smelting and separation of rare earth metal (limited to equity joint ventures or contractual joint ventures)

#### **10. Common Purpose Equipment Manufacturing Industry**

~~{1}Manufacturing of all kinds of general (p0) axletree and accessory (steel ball, cage), rough~~

~~{2}Manufacturing of wheeled model, crawler crane of less than 400 tons (limited to equity joint ventures or contractual joint ventures)~~

#### **11. Special Purpose Equipment Manufacturing Industry**

~~(1) Manufacturing of equipment for producing long-Dacron thread and short fiber~~

~~(2) Manufacturing of crawler dozers of not more than 320 horsepower, hydraulic excavator of not more than 30 tons, wheel loader of not more than 6 tons, grader of not more than 220 horsepower, road roller, fork lift truck, electric driving non-calzada dumper truck at the level of 135 tons or below, hydromechanical transmission non-calzada dumper truck at the level of 60 tons or below, asphalt concrete stirring and paving equipment and aerial work machinery, garden machine and tools, production of commodity concrete machinery (pump, agitating lorry, mixing plant, and pump vehicle)~~

## ~~12. Manufacturing of transport and communication facilities~~

11. Manufacturing of auto vehicle, special vehicle and motorcycle: shares of Chinese partner is no less than 50% and the same foreign company can set up less than two (including two) joint ventures manufacturing the same kinds of vehicles (passenger cars, commercial vehicles, motorcycles) in China. If joint acquisition of other domestic automobile production enterprises is done with the Chinese partner, the foreign company cannot be restricted by the conditions mentioned above.

12. Repairing, designing and manufacturing of ship (including subsection) (Chinese partner shall hold the majority of shares)

## ~~13. Manufacturing of Communication Apparatus, Computers and another Electric Installation~~

13. Production of satellite television receivers and key parts

## IV. Production and Supply of Power, Heating Power, Gas and Water

14. Construction and management of conventional coal-fired power of condensing steam plants whose unit installed capacity is 300,000kW or below, and coal-fired power of condensing-extracted steam plants with dual use unit cogeneration whose unit capacity is 100,000kW within the small power grid

~~2. Construction and management of power network (Chinese partner shall hold the majority of shares)~~

15. Construction and management of urban gas, heating power and water supply and drainage pipe network with a population of 500,000 or more (Chinese partner shall hold the majority of shares)

Comment [Author8]: The 2015 Catalogue moves this item from the restricted list (here) into the encouraged list.

## V. Communication and Transportation, Storage, Post and Telecommunication Services

~~1. Railway freight transportation companies~~

16. Railway passenger transportation companies (Chinese partner shall hold the majority of shares)

17. Corporate of highway passenger transport



~~4. Corporate of enter-leave country fleet operation~~

18. Corporate of water transportation (Chinese partner shall hold the majority of shares)

19. General aviation companies engaging in [business flying, air travel](#), photographing, prospecting and industry (Chinese partner shall hold the majority of shares)

## **VI. Information Transmission, Software and Information Technology Services**

20. Tele communication companies: telecommunication increment service (the foreign capital shall not exceed 50 percent, [except for electronic commerce](#)), basic telecom business (the foreign capital shall not exceed 49 percent)

## **VII. Wholesale and Retail Trade Industries**

~~1. Commodity direct selling, mail order selling, and on-line selling~~

21. Purchase of grain, ~~and wholesale, retail and logistic distribution~~ of grain and cotton, ~~vegetable oil, sugar, medicines, tobaccos, automobiles, crude oil, capital goods for agricultural production (Chinese should hold the majority of shares of the multiple shops which have more than 30 branch stores and sell different kinds and brands of commodities from multi-suppliers)~~

~~3. and construction and operation of large wholesale market of agricultural products~~

~~4. Distributing and selling of audiovisual products (except movies) (limited to joint ventures)~~

22. Ship agent (Chinese should hold the majority of shares), tally for foreign vessels (limited to equity joint ventures or contractual joint ventures)

23. ~~Wholesaling product oil and~~ Construction and operation of gasoline stations (Chinese should hold the majority of shares of the multiple shops which have more than 30 branch stores and sale different kinds and brands of commodities from multi-suppliers)

## **VIII. Banking and Insurance Industries**

24. Banks ([shares of a single overseas financial institution and related parties under its control or joint control as the originator or strategic investors shall not exceed 20% in a single Chinese commercial banks; total share of multiple overseas financial institutions and related parties under its control or joint control as the originator or strategic investors shall not exceed 25%; overseas financial institutions investing in the rural small and medium-sized financial institutions must be banks](#)), ~~finance companies, trust investment companies, currency brokerage companies~~

25. Insurance companies (the share of life-insurance companies shall not exceed 50%)

26. Security companies (only engaged in underwriting, recommendation and guarantee of RMB common stock, capital stocks, government bonds and corporate bonds as set up, brokerage of foreign share and brokerage and proprietary of government bonds and corporate bonds; after development of two years, qualified companies can apply to expand the business scope; confined to A share consignment in, B share, H share and government and company bonds consignment in and transaction), the foreign-capital shall not exceed ~~49%~~one-third), in security investment fund management companies, the foreign capital shall not exceed 49%.

#### ~~4. Insurance brokerage companies~~

27. Futures companies (Chinese should hold the majority of shares)

### ~~VIII. Real Estate Industry~~

~~1. Development of pieces of land (limited to equity joint ventures or contractual joint ventures)~~

~~2. Construction and operation of high-ranking hotels, high-class office buildings and international exhibition centers~~

~~3. Real estate transaction in second-grade market and medium and brokerage companies~~

### IX. Leasing and Commercial Service Industry

#### 1. Legal consulting

28. Market research (limited to equity joint ventures or contractual joint ventures; Chinese partner shall hold the majority of shares during ratings survey of radio and television)

29. Status enquiry and grade service companies

### X. Scientific Research and technical Services Industries, ~~Geological Prospecting~~

30. Mapping companies (Chinese partner shall hold the majority of shares)

~~2. Inspection, verification and attestation companies for imported and exported goods~~

~~3. Photography service (including trick photography like air photograph, except mapping aerial photography, limited to equity joint ventures)~~

### XI. Education

31. Higher educational institution (limited to contractual joint ventures, and led by Chinese partner\*)

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**Comment [Author9]:** The 2015 Catalogue removes this item from the restricted list (here), suggesting that this item is now permitted unless otherwise provided.

The 2015 Catalogue then goes on to add "China legal affairs consulting" into the prohibited list with a carve out for "provision of information about environmental impact of Chinese law." This carve out is a clunky English translation of China's WTO commitment to allow for the provision of information on the impact of the Chinese legal environment (the Chinese (official) version of this 2015 Catalogue carve out is consistent with the WTO commitment).

**Comment [Author10]:** The 2015 Catalogue moves "higher educational institution" from the encouraged list to the restricted list (here).

The 2011 Catalogue stated that higher educational institutions were "limited to equity and contractual joint ventures" while the 2015 Catalogue states that they are "limited to contractual joint ventures." While this may appear to be an added limitation on the face of it, the fact is that relevant laws and regulations already limited higher education institutions to just contractual (also known as "cooperative") joint ventures. The change in the Catalogue makes it more consistent with and reflective of prevailing laws and regulations.

Also, as noted above, the English translation of the 2015 Catalogue uses the term "higher education institutions" while the English translation of the 2011 Catalogue used the term "advanced educational institutions." The official Chinese term used has not changed (高等教育机构).

\*Domination by Chinese partner means the principal or the principal administrator shall have Chinese nationality, and the Chinese members in the board of trustees, the board of directors or the joint management committee of Chinese-foreign cooperative schools shall not be less than 1/2 (similarly hereinafter).

32. Common high school education institutions (limited to contractual joint ventures, and led by Chinese partner)

33. Preschool education institutions (limited to contractual joint ventures, and led by Chinese partner)

## **XII. Public Health and Social Work**

34. Medical Institutions (limited to equity joint ventures or contractual joint ventures)

## **XIII. Culture, Sports and Entertainment Industries**

35. Production and publication of broadcasting and TV programs and film-making (limited to contractual joint ventures)

36. Construction and operation of cinemas (Chinese partner shall hold the majority of shares)

37. Construction and operation of large theme park

38. Brokering agency of stage performances (Chinese partner shall hold majority of shares)

~~5. Operation of entertainment occupancies (limited to equity joint ventures or contractual joint ventures)~~

**XIV. Other industries restricted by the State or international treaties that China has concluded or taken part in**

**Comment [Author11]:** The Chinese (official) version of the 2015 Catalogue adds "laws and regulations" after "the State." That addition is not reflected in this English translation.

## Catalogue of Prohibited Foreign Investment Industries

### I. Farming, Forestry, Animal Husbandry and Fishery Industries

1. Research, development, cultivation and growth of China's rare and unique precious breeds, and production of related propagating materials (including fine genes in plants industry, husbandry and aquatic products industry)
2. ~~Breeding of transgenic varieties of~~ ~~Research and development of genetically modified organisms, and production of genetically modified~~ crops' ~~seeds~~, livestock, poultry and aquatic fingerlings and production of transgenic seeds (seedling)
3. Fishing in the sea area under the jurisdiction of China and in in-land water of China.

### II. Mining and Quarrying Industries

4. Exploring and mining of tungsten, molybdenum, tin, antimony, fluorite
5. Exploring, mining and dressing of rare earth metal
6. Exploring, mining and dressing of radioactive mineral products

### III. Manufacturing Industry

#### ~~1. Beverage manufacturing Industry~~

~~(1) Processing of green tea and special tea with China's traditional handicraft (famous tea, dark tea, etc.)~~

#### (I) Medical and Pharmaceutical Products Industry

7. Processing of traditional Chinese medicines that have been listed as the Regulations on Conservation and Management of Wild Chinese Medicinal Material Resources and Rare and Endangered Plants in China
8. Application of preparing technique of traditional Chinese medicines in small pieces ready for decoction, like steam, frying, moxibustion, calcining, and production of the products of secret recipe of traditional Chinese patent medicines

#### (II) ~~Non-Ferrous Metal Smelting and Rolling~~ Processing Industry of Petroleum, Coking and Nuclear Fuel

9. Smelting and processing of radioactive mineral products and production of nuclear fuel

### (III) Special Equipment Manufacture Industry

10. Manufacturing of Weapons and Ammunition

#### ~~5. Electric Machinery and Equipment Manufacture Industry~~

~~(1) Manufacturing of open lead-acid (namely, acid fog direct outside release) cells, mercury button type silver-oxide cells, mercury button type alkaline zinc-manganese dioxide cells, paste dioxide-zinc battery, and nickel-cadmium cells~~

### (IV) ~~Industry Products and~~ Other Manufacturing Industries

11. Ivory carving

12. Tiger-hone processing

~~(3) Production of bodiless lacquer ware~~

~~(4) Production of enamel products~~

13. Production of Xuan-paper (rice paper) and ingot-shaped tablets of Chinese ink

~~(6) Production of carcinogenic, teratogenic, mutagenesis and persistent organic pollutant products~~

### IV. Production and Supply of Power, Heating Power, Gas and Water

14. Construction and management of ~~outside small power grids~~, conventional coal-fired power of condensing steam plants whose unit capacity is not more than 300,000kW, within the large power grid, and the coal-fired power of condensing-extraction steam plants with dual use unit cogeneration with unit capacity of not more than ~~100~~200,000KW

### V. Communication and Transportation, Storage. Post and Telecommunication Services

15. ~~Companies of~~ Air traffic control

16. Companies of postal services, and domestic express delivery of letters

### VI. Wholesale and Retail Trade

17. Wholesale and retail of tobacco leaf, cigarette and redried leaf tobacco, and other tobacco products

## VII. Leasing and Commercial Service Industry

### 18. Social investigation

[19. China legal affairs consulting \(except for provision of information about environmental impact of Chinese law\)](#)

## VIII. Scientific Research and Technical Services Industries, **Geological Prospecting**

### 20. Development and application of human stem cells and gene diagnosis therapy technology

21. Geodetic survey, marine charting, aerial photography for mapping, administrative mapping, relief map, ~~common~~ [the world administrative map](#), [the national administrative map](#), [administrative map of the provincial level and below](#), [national teaching map](#), [compilation of local teaching map and three-dimensional map](#); [compilation of navigation electronic map](#); [surveys relating to regional geological mapping](#), [mineral geology](#), [physical geography](#), [geochemistry](#), [hydrogeology](#), [environmental geology](#), [geological disaster and remote sensing geology](#)

## IX. Irrigation, Environment and Public Utilities Management

### 22. Construction and management of nature reserve and international signify marshy

### 23. Development of resources about wild animals and plants be native to domestic protected by nation

## X. Education

### 24. Institution of compulsory education and special education, like military, policeman, politics and party school

## XI. Art, Sports and Entertainment Industries

### 25. News agencies

### 26. Publication of books, newspaper and periodical

### 27. Publication and production of audio and visual products and electronic publications

28. Radio stations, TV stations, radio and TV transmission networks at various levels (transmission stations, relaying stations, radio and TV satellites, satellite up-linking stations, satellite receiving stations, microwave stations, monitoring stations, cable broadcasting and TV transmission networks)

### 29. Companies of publishing and playing of broadcast and TV programs

**Comment [Author12]:** While the 2015 Catalogue removes "legal consulting" from the restricted list, it adds "Chinese legal affairs consulting" here.

The carve out for "provision of information about environmental impact of Chinese law" (as explained above, a clunky English translation of China's WTO commitment to allow for the provision of information on the impact of the Chinese legal environment, a commitment that is more accurately written in the official Chinese version of the 2015 Catalogue) was not contained in the November 2014 draft circulated for public comment, suggesting that public feedback had an impact on the final version here.

30. Companies of films making, issuing, business

31. News website, network audiovisual service, Internet service location, internet art management (except music)

32. Auction companies and antique shops engaging in antique auction

33. Construction ~~and management~~ of golf course and villa

Comment [Author13]: The Chinese (official) version of the 2015 Catalogue adds “network publishing service” between these two items. That addition is not reflected in this English translation.

## XII. Other Industries

34. Projects that endanger the safety and performance of military facilities

35. Gambling industry (including gambling turf)

36. Eroticism

## XIII. Other industries ~~restricted by the State~~ national laws and regulations or international treaties that China has concluded or taken part in

Comment [Author14]: Incorrect translation. This should be “prohibited” as this is the prohibited list. This is written correctly in the Chinese (official) version.

Note that this translation error can also be found in the English translation of the 2011 Catalogue.

Notes: CEPA agreement between the Mainland and Hong Kong and supplemental agreement, CEPA agreement between the Mainland and Macao and supplemental agreement, Cross-strait Economic Cooperation Framework Agreement and supplemental agreement, free trade agreement [and investment agreement](#) signed by China and other related countries shall prevail if there are any separate regulations.

~~2. If otherwise provided in the special regulations of the State Council or industrial policies, such regulations or policies shall prevail.~~