

ALTAIR

Altair is the brightest star in the constellation of Aquila and the twelfth-brightest star in the night sky. Altair is a type-A main-sequence star with about 1.8 times the mass of the Sun and 11 times its luminosity.

It is thought to be a young star close to the zero age main sequence at about 100 million years old, although previous estimates gave an age closer to one billion years old.

The term Al Nesr Al Tair appeared in Al Achsasi al Mouakket's catalogue, which was translated into Latin as Vultur Volans. This name was applied by the Arabs to the asterism of Altair,

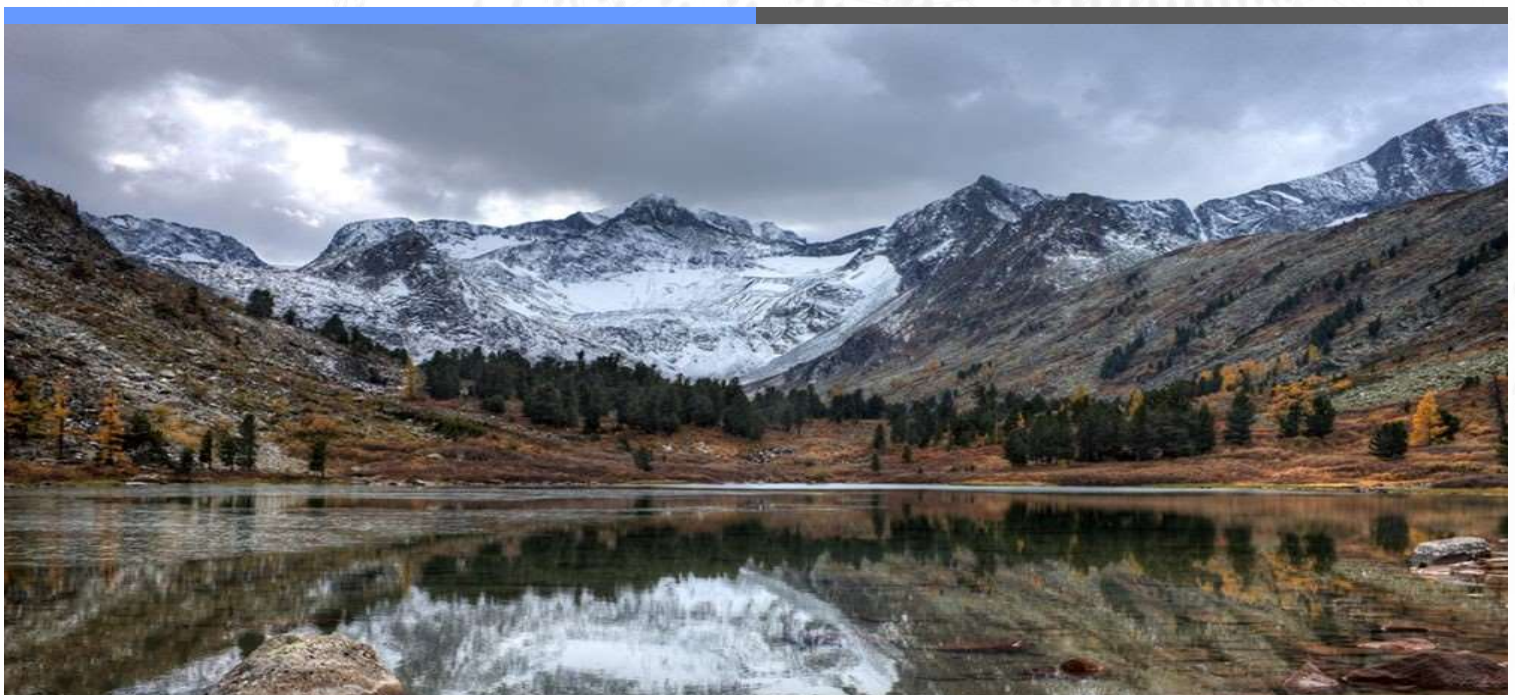
β Aquilae and γ Aquilae and probably goes back to the ancient Babylonians and Sumerians, who called Altair "the eagle star"

The Altai Mountains (/ɑ:l'taɪ/), also spelled Altay Mountains, are a mountain range in Central Asia and Eastern Asia, where Russia, China, Mongolia, and Kazakhstan converge, and where the rivers Irtysh and Ob have their headwaters. The massif merges with the Sayan Mountains in the northeast, and gradually becomes lower in the southeast, where it merges into the high plateau of the Gobi Desert. It spans from about 45° to 52° N and from about 84° to 99° E. The region is inhabited by a sparse but ethnically diverse population, including Russians, Kazakhs, Altais, Mongols, and Volga Germans, though predominantly represented by indigenous ethnic minorities of semi-nomadic stock... **Altair is the icon for Eurasia the new strategic fronteer of global economy (2024)**

As designers, integrators of various technical systems and general contractors, we only provide details of our technology partners and suppliers against confirmed orders

We list just a few of our references, which include not only machinery and production equipment but also functional control programmers (SCADA) and medium- and long-term ordinary and extraordinary maintenance contracts, all covered by insurance against default and loss of profit

This document represents the result of our work with our professional colleagues since 2008. If you are interested in a possible association, we can provide you with the total approved project portfolio we have in assignment

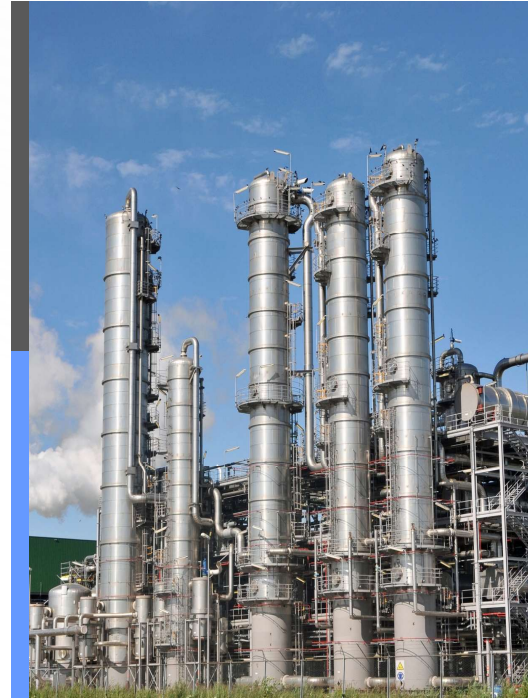


Als Planer, Entwickler, Integrator verschiedener technischer Systeme und Generalunternehmer geben wir Angaben zu unseren Technologiepartnern und Lieferanten nur gegen bestätigte Aufträge weiter

Wir führen nur einige unserer Referenzen auf, die nicht nur Maschinen und Produktionsanlagen, sondern auch funktionale Steuerungsprogramme (SCADA) (ANN) Artificial Neural Network, (AI) Artificial Intelligence und mittel- und langfristige ordentliche und außerordentliche Wartungsverträge umfassen, die alle durch eine Versicherung gegen Ausfälle und Gewinneinbußen abgedeckt sind (De Risk Policy)

Dieses Dokument ist das Ergebnis unserer Arbeit mit unseren Fachkollegen seit 2008. Wenn Sie an einer möglichen Zusammenarbeit interessiert sind, können wir Ihnen das gesamte genehmigte Projektportfolio zur Verfügung stellen, das wir im Einsatz haben

HISTORY



After a successful career in the management of global refrigeration and air conditioning brands (TRANE Epinal - Hoofddorp, WABCO WESTINGHOUSE Wien, YORK Wien) Altair engineering was founded in 1998 in Los Angeles by **Nicolo Cerni and Norman R Sutherland Associates (Photo)**,

Trade Commissioner and Honorary Consul of the British Embassy in the US, as an industrial and technology marketing company. In 2001 Altair and N Cerni developed the main part of their business in close collaboration with the GCIC Gold **Coast Innovation Center in Camarillo, Ventura County, CA, on the US University campus in Camarillo**, an incubator of hi-tech companies in the renewable RES sector directed and supervised by world-renowned technologists and scientists such as: Gerd Zierloh (Bosch) , Myron Miller (Power distribution) John Mungenast (GE and ABB), Steve Herman (Litton Aero space), Rick Sauerwine (Battelle Memorial Institute), Howard Somberg (NST New Silicon Technologies & Global pv Canoga Park). The incubator worked closely with the US MARINE CORPS Engineers, in S Diego, and the US Army technology equipment base in Jacksonville FL. During those years, and until 2013,

Altair became a brand that was later copied by many other companies that use that same name today. Among the many innovative projects realised are: Motorola's military-derived Ruggedized Field data logger, MILTEL Israel's satellite data logger for industrial data, TADIRAN's Military Radio Guidance Projectiles, Israel, Meter Reading satellite energy AMRA and MEGSAT Italy, Sky Eye (CH and CANADA) satellite control system for rail and road vehicle fleets, ORB COMM galaxy, electronic expansion valve for refrigeration circuits, GE-ABB screw, rotary and centrifugal compressor and turbine power controllers, Biogas from agricultural by-products and sewage (On-site Power Technologies Wisconsin 1997-2013), Fuel cells (ABB + California University of Camarillo Ventura 1996-2000) ,

Photovoltaic cells from mineral silicon and biogenic silicon $6 N$ So Si, SiC carbide mechanical and electronic grade silicon , Amorphous Silicon A Si, CD Te and As Ga cells, Reel-to-reel production technologies CISG CIGS, texturing and laser guided chemical writing (Applied Materials) Pyrolysis and Pyro-gasification (Slow, FAST, Flash, High Temp, Low Temp, catalized) , Mixed carburation hydrogen-diesel engines, and diesel methanol. After 2013, with the move to Germany, NCA Nicolo Cerni continued to offer scientific and technical know-how and also to deepen project finance techniques suitable for supporting research and medium- and large-scale projects. The number of associate partners has grown to cover all major technology sectors related to renewable energy. A list of our members and the services they offer is constantly updated. Altair offers - for example - a worldwide database of the 980 pyro-gasification plants in operation, constantly updating performance data. Over the past 10 years, Altair - NCA's focus has been on perovskite PV cells and the purification of syngas and syn-oil from organic biomass, coal, wood, lignite, and waste.



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(Stake holding available for new associates)

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BUSINESS PLANS



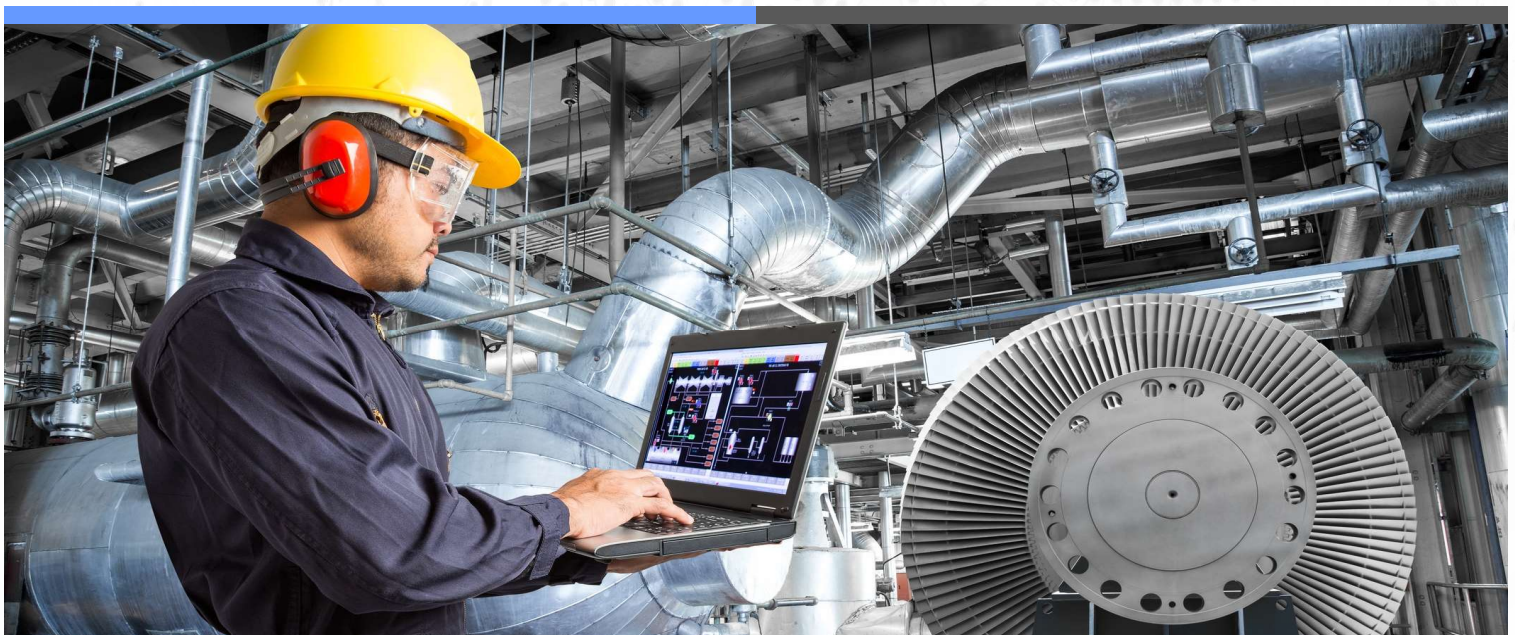
DROP IN FUELS (and NON DROP IN)



FEASIBILITY STUDY



HYDRO



SOLAR PHOTOVOLTAICS

Active in solar photovoltaics since 1997 (Los Angeles, Global PV specialists Howard Somberg) we provide design and construction for all commercially applied technologies: (Mono and Poly Cry, CdTe, A-Si, CIS, CGIS, Multilayer, Organic, IR sensitive, Ga As, Perovskite) certified and guaranteed efficiencies from 10 to 22%. We also supply CPV, lenticular and reflective mirror optical concentrators, with heat storage in PCM phase change materials, diathermic oil, saline fluid. Experts in BOS balance of system and maximum efficiency on shadows for agri-voltaics. Non recourse project and ABS (assets Based Securitization) financing available

BIOGAS, BIOMETHANE

RNG from biogas: Membrane Separation, Pressure Swing Adsorption (PSA), Amine Scrubbing and Water Wash (or water scrubbing), Reverse Stirling Cycle, Linde liquefaction condensing

We offer from design to construction of biomethane plants, new or with revamped reconstruction of the old biogas plant. Maintenance and control are directed remotely with advanced SCADA equipped with AI, with sensors in ANN Artificial Neural Network mode

We can carry out biochemical methane potential (BMP) tests with AMPTS to assess the activity of a digestate from a wastewater treatment plant or any valuable feedstock.

Automatic Methane Potential Test System (AMPTS) III is the research-standard analytical tool preferred by scientists and engineers for conducting various anaerobic batch fermentation tests.

Projects paid and booked as company assets can be equity used for new loans, leverage starts at 10% equity to 90% Debt.



WINDPOWER

We specialise in micro and small wind power, for powers from 1.6 to 200 kWe, served by battery and compressed air storage. All axial and radial technologies with advanced materials are offered. Continuous function controls with sophisticated software to optimise efficiency. Wind analysis of sites on the basis of satellite wind maps from military aeronautical sources and free data from NASA; 50% less time required than with common software and wind sensors (max. 3-6 months vs. 10-12 statistical months) . Noise and low-pressure systems. Protection of flying fauna. Modern wiring in special alloys. Maintenance at any height, even for towers 60 metres and more. Automated digital wind turbine optimization

DROP IN FUELS and NON DROP IN

Drop in fuels are fuels that can be shipped in the same pipelines as petroleum and petroleum products, thus eliminating the need for higher-cost truck and rail shipping

Dropins are Terpenes, butanol and isoprene, among other. Often, the technology is applied to diesel fuel, forming a biodiesel, we refine synoils and biodiesels from organics and organic waste

We can also offer blue and green hydrogen as carriers, coke, coal or NH₃ derived H.

Our distillation and refinery plants can also produce (m)ethanol, + gaseous fuels. Special retrofit for diesel oil cogen sets with E hydrogen hybrid carburation (max 20% fuel saving) offered. We can retrofit any engine with Hydrogen injection. Special fuel reconciliation SW service offered (Sat based and non sat based). US made multilayer H Safety tanks supplied both marine, rail and road.



HYDRO

We supply turn key hydro power plants for hydroelectric power production

Services: Hydrological balances, Reservoir filling levels,

Inflow levels (run-of-river and reservoir), Precipitation energy and evaporation

Snow and groundwater levels. Italian and Austrian engineering, HE and all turbines

COGENERATION, TRIGENERATION, QUADGENERATION

Within our service for energy saving we can offer you **CHP, CCHP and CCS (CO2-H)** solutions using gen sets, **HRSG** Heat recovery generators, **HAT** Hot Air Turbines, Gas turbines,

ORC Organic Rankine Cycle, Steam Turbines, Combined Cycles. Our cold cogeneration hitechs are based on 2 stage Absorption (fm 85 °C up) , and Adsorption (below 80 °C to 42 °C enthalpy and even less w vacuum)

Heat storage and distribution is done by way of hitech **PCM Phase Change Materials** (Paraffine , eutectics, salt hydrates, organic materials, and high temperature salts....)

FINANCE

N C A Financials provides a wide range of industry-specific financial model templates in Excel, all bank agreed accompanied by EEC standard business plans proformas templates. Building a financial model with detailed financial projections can be quite time-consuming. We, therefore, offer a platform for a wide range of industry-specific financial forecasting model templates in Excel, which offers not only a good structure but also the best-in-class financial modeling know-how to users such as key executives, entrepreneurs, investors, and many more, who need of assistance in creating a financial projections template. The financial planning templates are created by our skilled and experienced financial modeling experts. Agreed and certified auditors reviews are available. Using a financial projections template in Excel saves significant time and provides the benefit of using already existing industry and financial modeling know-how.

KPIs are measurable values that demonstrate how effectively a company is achieving key business objectives. Our financial model templates include customizable KPI dashboards, allowing you to track and analyze the metrics most relevant to your business goals. (Typical KPI are: IRR, NPV, ROI, ROE, EBITDA, WACC, ...)

We have been in the industry since 1988, and since 2007, the first major Western financial crisis, with the related conditions of bank credit restriction (Crunch) we have organized a professional network with high capabilities to offer project financing for industry, infrastructure and luxury real estate. In addition to the usual Equity/Debt financial levers available mainly from merchants and family offices, we are in personal contact with wealth management, asset management funds and institutional finance of the ESG class. We can arrange the use of different financial instruments (BG, SBLC, ABE avalized bills of exchange, WCG works completion guarantees, Mezzanine Funds, ABS Assets Backed Securitization etc. etc.) for values generally above 10 million USD/ EURO, to as high as 500 million EURO/USD and occasionally, beyond. PR investors relations are all personal

and enjoy the utmost discretion. We have no broker chains ("daisy chains of intermediaries) and deal only directly with business owners (applicants) and lenders-investors

Our work is based on PEF pre-established financial business plans and short and very professional project teasers, if these documents are approved there are no upfront costs

Good practice checks (due diligence) are paid for by borrowers or applicants for financing. We can contribute ourselves to the DDs thanks to our experience in regulatory

procedures and - above all- technology validation. For requests, it is essential to submit projects through our audits online

01

Generic Request

<https://www.altair-international.com//finance/> (10 minutes)

02

Enquiry For Real Estate, Hotellerie, Entertainment

<https://www.altair-international.com//finance/>

03

<https://www.altair-international.com//contacts/>
quick request (fast track) (3 minutes)

There are countless specialised business plans available for each sector, prepared by our analysts with EXCEL, they are all bankable and offer exact calculations of all econometric parameters (**KPI Key Performance Indicators** i.e. DSCR, IRR, NPV, DCF, EBITDA, ROI, ROE, WACC,...and more), please note that if you send in plans and presentations without filling in the above links, we do not guarantee that we will be able to fulfil your requests. Thank you for your attention and consideration.



INTANGIBLE ASSETS

Intangible asset finance, also known as "IP finance", is the branch of finance that uses intangible assets such as intellectual property (legal intangible) and reputation (competitive intangible) to gain access to credit. Like other areas of finance, intangible asset finance is concerned with the interdependence of value, risk, and time. Besides Patents and IP Process Know How, scientific validation is critical for financing success

ABS ASSETS BACKED SECURITIZATION

Assets securitization is the process of converting illiquid non-tradeable assets into liquid tradeable securities that can be issued to the investors. The different financial assets like loans and other receivables are underwritten and sold in the form of asset-backed securities, assets can be power purchase agreements, offtake agreements (take and buy), energy plants shareholding

BUSINESS PLANS

Pro forma development is the practice of projecting future revenues, expenses, assets, and liabilities of a company. It helps businesses plan ahead by providing an informed view of expected or potential financial success

Financial business plans must be accepted by the sponsoring banks, lenders or investors; by using ours, you avoid unnecessary discussions and corrections or, worse, the failure of finance requests. All our plans meet the highest banking quality standards.

FEASIBILITY STUDY

The fundamental and necessary basis of any investment or work in the field of energy installations is the (pre) - feasibility study. Once the objectives of energy production or consumption savings have been established, the next step is the (pre)feasibility study. This applies both to a simple 4 kWe photovoltaic plant up to plants of many MWe. There are no ready-made off-the-shelf solutions or finished products; each plant needs not a magic bullet or golden bullet. In addition to the preconditions of the location, local laws and regulations, extensive and in-depth knowledge of suppliers and products and a viable and financeable conceptual design are required. We are not tied to any industry, bank or financier and therefore we work solely in the interest of the customer, which is why all our studies are paid for and customers are free to then choose their suppliers, they are not conditioned (un biased studies) , we always offer two or three alternatives of the planned systems, for details see www.aes-nrg.eu. Verifiable references on our 130 projects and feasibility studies are available upon receipt of assignments and orders.



OPERATION & MAINTENANCE



- Asset performance management
- Cable fault location, testing, and diagnostics
- Cable online monitoring
- Circuit breaker testing
- Electrical insulation testing
- Electrical resistance testing
- Electrical systems backup and quality
- Electric vehicle charge point testing
- Grid measurement devices and testing
- Low voltage installation testing
- Motor and generator testing
- Partial discharge testing and monitoring
- Relay and system testing
- Power transformer testing and monitoring

WORKS SECTORS



- Cable contractors
- Distribution networks
- Electric substations
- Electricians
- Heavy industry, mining, and manufacturing
- OEMs (Original Equipment Manufacturers)
- Power generation
- Renewables
- Transmission
- Transportation
- Water utilities
- Refineries, Steel Works, Mines

ASSETS TESTS



- Arresters
- Batteries
- Busbar joints, welds, and bonding
- Bushings
- Cables
- Circuit breakers
- Circuit testing
- DERs (Distributed Energy Resources)
- Digital substations
- Electric meters
- Instrument transformers
- Insulating fluid
- Overhead lines
- Relays