



Sustainable Factory-built Net Zero Energy Buildings

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Introduction

Innovative technical designs revolutionize lives, empower people, and deliver real-life solutions. The problem is that energy-efficient and environmentally friendly solutions for home builders are fragmented or stand-alone fixes at best, and traditional building methods have not advanced with modern technology. We transform construction through the innovation of processes and technology. The vision is to create affordable high-tech sustainable factory-built housing to meet the needs of the growing global population and to curb the negative impact building has on the environment.

Akchurin Buildings is the innovative design, construction, and assembly of Sustainable Factory-built Net Zero Energy Buildings with smart technology ecosystems for healthy and environmentally friendly living. Net zero energy, zero water, and zero carbon Akchurin homes produce renewable energy and harvest water using innovative technology to guarantee 100% autonomous, renewable living. Our patented, fast green construction technology saves time, and the smart home ecosystems reduce water and energy consumption by up to 65%.

Akchurin's Buildings do not require a connection to the grid and produce 50% more renewable energy per year than they consume. Lithium-ion batteries are built-in and guarantee use for seven months. Our zero water buildings use a unique air conditioning and condensate collection system to generate water with geothermal energy. Innovative air purification and bottom-up air exchange technology ensure high quality, clean air, and safety in the event of future pandemics.

Akchurin Inc.



Sustainable Technology

NET ZERO ENERGY Independence from the grid with renewable energy



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SMART HOME Energy-saving intelligent automation system



TIME SAVINGS Turn-key house in 6-12 months



RENEWABLE ENERGY STORAGE Built-in battery for seven months of autonomous use in the absence of electricity



CLEAN AIR Energy-saving technology to purify, disinfect, humidify, cool, and heat air



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NET ZERO WATER Independence from a centralized water supply

SUSTAINABLE PRODUCTION Robotic factory-built quality with multi-level system control

ZERO GREENHOUSE GAS EMISSIONS Recyclable and renewable eco-building materials

EASY MAINTENANCE 100% access to all engineering systems without demolishing



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Interior

Living Room



















Kitchen







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Bathroom







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Bedroom









Master Bedroom






















Sustainability

Sustainability

Energy-efficient, environmentally responsible, and sustainable building processes create healthier and safer homes. Cutting-edge inventions, designs, and engineering systems revolutionize the way we build and live to meet the needs of the growing population and protect our environment.



Akchurin Solution to the Global Energy Problem



PROBLEM

EXPENSIVE ELECTRICITY: One in five people worldwide does not have access to electricity. About 3 billion people depend on traditional biomass, such as wood or plant materials, for energy, cooking, and heating. United Nations Goal 7 (UN).



SOLUTION

AFFORDABLE AND CLEAN ENERGY: Akchurin net-zero energy homes do not require a connection to traditional energy sources. They use energy from renewable sources and produce 50% more energy per year than they consume—homes without electricity bills.



PROBLEM

INEFFICIENT ENERGY STORE is a crucial issue for the entire global energy sector. Modern technologies can provide sufficient generation levels, but a lack of cost-effective storage technologies remains, limiting opportunities for the industry's transformation. World Energy Council (WEC).

SOLUTION

RELIABLE ENERGY STORAGE FOR RENEWABLE ENERGY: Lithium-ion batteries built-in the Akchurin floor units guarantee seven months of autonomous use in the absence of electricity.

PROBLEM

GREENHOUSE GAS EMISSIONS: Energy use is the dominant driver of climate change, accounting for about 60% of all global greenhouse gas emissions. In 2019, CO2 emissions increased to 9.95 Gt per year, with 38% of emissions coming from the construction industry's energy sector. United Nations Goal 13 (UN).

SOLUTION

FAST GREEN CONSTRUCTION TECHNOLOGY: 97% of the building materials used in Akchurin structures are recyclable. Fast and clean house assembly takes from one to three months and reduces construction debris, which significantly reduces the environmental impact and CO2 emissions.

PROBLEM

AIR POLLUTION from the use of combustible fuels for cooking and heating has claimed 4.3 million lives. More than half of the world's urban population breathes air 2.5 times higher than safety standards. World Health Organization (WHO).

SOLUTION

CLEAN AIR: Innovative air purification and bottom-up air exchange technology ensure high quality, clean air with minimal energy costs, ensuring Akchurin homes remain safe in the event of future pandemics.

PROBLEM

ENERGY CONSUMPTION FOR WATER SUPPLY: The amount of energy consumed by water systems worldwide is more than 26 quadrillion kWh, accounting for 7% of total global consumption. Electricity consumption in this sector is projected to grow 23% in 2022 from 2000 and 63% in 2050. Congressional Research Service (CRS).

SOLUTION

ENERGY-SAVING AUTONOMOUS WATER SUPPLY: Akchurin's innovative air conditioning and condensate collection system generates 100,000 liters of water per year using geothermal energy. Akchurin houses use an energy-efficient system to collect, store, and biologically self-purify rainwater – NO water bills.

PROBLEM

ELECTRICITY WASTED FOR HEATING: 64% of energy consumed by households in the EU in 2018 was for heating. (IEA) Roughly 20% of US energy-related greenhouse gas (GHG) emissions stem from heating, cooling, and powering households. (PNAS)

SOLUTION

HEAT ENERGY SAVINGS: Ecosystem engineering and ground source heat pumps reduce energy demands for heating, ventilation, air conditioning, and water heating by up to 60% compared to traditional energy sources.

PROBLEM

AN UNBALANCED INCREASE IN ENERGY CONSUMPTION is due to an increase in the world population (by 2050 will increase to 9.7 billion) and an increase in energy consumption per person due to the rise in living standards. United Nations (UN).

SOLUTION

SMART ENERGY CONSUMPTION: An intelligent automation system (Smart Home) based on artificial intelligence (AI) reduces electricity consumption by up to 65%.

Technology

Roof Panel

Modular roof panels with integrated hidden solar panels, reflecting mirrors, wind generators, batteries, and a rainwater collection and storage system that generates electricity.

Door

Multifunctional door, an element of the smart home ecosystem and ventilation.

Light

Energy-efficient lighting.

Floor / Interfloor Unit

Modular interstory floors with integrated engineering systems.

AK Airplex

An element of the ventilation and water condensation collection ecosystem.

Modular technical unit with integrated engineering systems for heating, air purification, ventilation, air conditioning, humidification and hot water supply.

Column System

Load-bearing modular columns integrated with an energy-efficient glass facade system made of transparent solar panels.

Smart Home Unit

Intelligent automation system based on artificial intelligence for smart energy consumption.

Mechanical Room

Sustainable Development

Climate-resilent World

Fast Green Construction

Compared to traditional building methods, our time-saving green building technology cuts construction time in half.

Akchurin method		NET ZERO EMISSIOI	NS: ECO-BUILDING			
ORDER ONLINE / DEALER	BUILD	DELIVER	ASSEMBLE			TIME SAVING (1-3 YEARS)
Traditional metho	d					
HIRING ARCHITECTS AND ENGINEERS	SCHEMATIC DESIGN	DESIGN DEVELOPME	CON ENT DO		BIDDING AND NEGOTIATION	CONSTRUCTIO
Akchurin House Finished						

Net Zero Water

Water independence from a centralized source means no water bills. Water harvesting technology and water-saving management systems produce water, reduce consumption, and save natural resources.

Akchurin method							NET ZERO WATER: N			
RAINWATER				THERMOSTATIC	LOW-FLOW	LOW-FLOW	LEAK	ENERGY-EFFICIENT		WATER PR
HARVESTING	SYSTEM	WATER SOURCES	MANAGER	SHOWER TOILETS FAUCETS DETECTOR		DETECTORS	APPLIANCES		WATER	
Renewable Water Production				Water Saving						
Traditional method										
SHOWERS				FAUCETS			TOILETS			
0 liter / gallon				Akchurin House — 289025 liters / 63576 gallons						Т

Water Consumption (liters / gallons)

NO WATER BILLS

ODUCTION: 350 000 liters / 77 000 gallons

SAVINGS: 160200 liters / 36700 gallons

APPLIANCES

raditional House – 456250 liters / 61590 gallons

Net Zero Energy

Energy independence from the grid means no electricity bills. Renewable energy production and energy-saving technologies produce electricity, reduce consumption, and save resources.

Energy Consumption (kWh/year)

NET ZERO ENERGY: NO ENERGY BILLS

ENERGY PRODUCTION: 30000-40000 kWh

ENERGY SAVINGS: 30000 - 50900 kWh

UNDERFLOOR HEATING

Traditional House – 35000-57000 kWh (Depending on the region)

Our Services

01 — Order Online / Dealer

02 — Factory-built

03 — Green Delivery

04 — Final Assembly

Technologies

TRADITIONAL HOUSE Old HVAC System

Cluttering the ceiling, traditional engineering systems, ventilation ducts, ceiling fan coils, diffusers, and grilles take up about 500 mm of space, and the drywall ceiling fan coil access panels often need repair.

AKCHURIN TECHNOLOGY New HVAC Technology

The ultra-thin, energy-efficient light is only 50 mm and is free from grills, diffusers, holes, and light fixtures. The door, AK Airplex, and mechanical room function as one clean air ecosystem leaving the ceiling space flawless.

TRADITIONAL HOUSE Common Electric Lighting

Heavy designs with cluttered light fixtures, wall sconces, and floor lamps are needed to light rooms and eliminate dark spots. Outdated technology influences how people use light fixtures, and not much has changed since Edison's 1879 invention.

AKCHURIN TECHNOLOGY Aurora-Sky Ceiling

The ultra-thin ceiling light is energy-efficient and seamless without holes or light fixtures. The next generation light fully illuminates every corner and eliminates shadows.

TRADITIONAL HOUSE Common Smart Home System

Inconvenient and mismatched smart devices use different systems, designs, and brands that do not match and are often difficult to set up. Outdated designs require switches, outlets, lamps, wiring, and plugs that clutter rooms and collect dust. Outlets haven't changed much since their invention in 1904.

Almost all outlets and switches are plastic, and plastic pollution is a significant environmental threat to our planet.

akchurin technology Affinity Door

The convenient and simple multifunctional door houses the ventilation, automation systems, and smart home ecosystem.

This minimalist technology has built-in outlets, switches, a wireless charger, solenoid locks, an air temperature sensor, an audio system, USB-C connectors, and a Wi-Fi repeater. Ecological door materials help reduce the risks to the environment.

TRADITIONAL HOUSE Engineering Systems

Outdated technology like underfloor convectors and ceiling fan coils are impractical, irrationally placed, and have limited accessibility.

Ceiling space is lost to engineering systems, ventilation ducts, ceiling fan coils, ceiling diffusers, grilles, and light fixtures that take up about 500 mm of valuable space. Slow construction and quality concerns are consequences of disjointed systems and methods, and onsite construction has limited quality assurance.

AKCHURIN TECHNOLOGY Infusion Inferfloor System

The inter-floor unit channels the engineering systems for fresh, disinfected, and humidified air, the water condensation system, the AK Airplex, the smart home automation system, and plumbing. The ultra-thin ceiling is only 50 mm thick since the other systems are located inside the floor unit and not the ceiling. Fast, sustainable factory-built construction integrates the electricity, automation, plumbing, and HVAC engineering inside the floor unit. All systems are ready for use on delivery.

TRADITIONAL HOUSE High-rise Building Methods

Long construction times are required to build concrete columns, assemble the curtain wall support structure, and install the glazing and facade cladding.

AKCHURIN TECHNOLOGY 4 in 1 Axis Column System

Fast green assembly with the 4 in 1 interlocking column system saves time and reduces construction waste. The column, built-in curtain wall system, energy-efficient windows, and facade are ready to assemble on delivery.

TRADITIONAL HOUSE Drywall System

Outdated drywall construction with electrical, plumbing, and ventilation systems frequently need to be demolished for maintenance and require repairs for holes, mold, and cracks. Unsustainable drywall cannot be reused or recycled—decomposing drywall leeches sulfate and other unhealthy chemicals into the water and releases hydrogen sulfide gas.

AKCHURIN TECHNOLOGY Solid Wall

Solid engineered walls are sustainable and provide sound insulation equal to a 1m brick wall. All utilities run through the floor unit and allow easy access for maintenance. Eco-friendly, custom-built bamboo, CLT walls and aluminum-honeycomb walls preserve air quality and the environment. Only natural materials are used, eliminating paint and volatile chemicals.

House Models

House Model AK500 Signature

1 FLOOR

House Model AK500 Signature

2 FLOOR

Room

- 1 Living and Dining Room
- 13 Master Bedroom
- 14 Master Bathroom
- 15 Master Bathroom
- 16 Walk-in Closet
- 17 Bedroom
- 18 Panoramic Bedroom
- 19 Bathroom
- 20 Bathroom
- 21 Walk-in Closet
- 22 Walk-in Closet

Key Features

Model AK500 SIGNATURE

5 bedrooms, 6 bathrooms 645 sq.m. (6,940 sq.ft.)

5 BEDROOMS

LIVING AND DINING ROOM

Eco-friendly Fireplace

6 BATHROOMS

Drop-in Spa Tub

,)))) ||) Smart Glass

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KITCHEN

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Laundry Room

Marble Island with Downdraft Exhaust Fan

TECHNOLOGY

House Model AK500 Premium

1 FLOOR

2

3

4

5

8

9

10

- Room
 Living and Dining Room
 Kitchen
 Laundry Room
 Pantry/Wine Room
 Mechanical Room
 Bedroom
 Panoramic Bedroom / Home Office
 Walk-in Closet
 Walk-in Closet
 Bathroom
- l1 Bathroom
- 12 Hall

House Model AK500 Premium

2 FLOOR

- # Room1 Living and Dining Room
- 13 Master Bedroom
- 14 Master Bathroom
- 15 Walk-in Closet
- 16 Bedroom
- 17 Panoramic Bedroom
- 18 Walk-in Closet
- 19 Walk-in Closet
- 20 Bathroom
- 21 Bathroom

Key Features

Model AK500 PREMIUM

5 bedrooms, 5 bathrooms 485 sq.m. (5,200 sq.ft.)

5 BEDROOMS

Attached Walk-in Closet

Office Area

5 BATHROOMS

Freestanding Tub

Shower

Toilets with Bidets

LIVING AND DINING ROOM

Straight Staircase

Floor-to-Ceiling Windows

KITCHEN

Wine Room / Pantry Room

Laundry Room \bigcirc

Marble Island with Downdraft Exhaust Fan

TECHNOLOGY

Air Conditioning, Heating Systems

- Water Condensation System
- ĒΨ, Solar Roof Panels
- 100% Accessible Engineering Systems 500
- Smart Home System
- 5 Smartphone Wireless Charger Dock

Additional Materials

HOUSE MODEL AK500 SIGNATURE	www.akchurin.us/ak500-signature/
BUILD HIGHER	www.akchurin.us/build-higher/
BOOK 'AKCHURIN NEW YORK'	www.akchurinstore.com/product/akchurin-hardcover-book/
PRICE LIST	www.akchurin.us/reservation/
SUSTAINABILITY	www.akchurin.us/sustainability/
BUSINESS	www.akchurin.us/business/
BUSINESS PRESENTATION	www.akchurin.us/wp-content/uploads/presentation-akchurin.pdf
INDIVIDUALS PRESENTATION	www.akchurin.us/wp-content/uploads/presentation-individuals.pdf
ВООК	www.akchurinstore.com/product/akchurin-hardcover-book/
APPLE BOOK	www.books.apple.com/us/book/akchurin-new-york/id1529900312/
FLOOR PLANS	www.akchurin.us/wp-content/uploads/floorplans_a3.pdf


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