

Fortin Flower / City design addenda

23 cities. Four pages each. Original open flower, optional sculptural crown, and one to three Energy Leaves.

A consistent global family. A different local brief.

Each addendum follows the same sequence: updated visual family, local applications, engineering priorities, and scope with cost allowances. Attach the relevant four pages to the existing city brochure.

These pages replace conflicting design imagery, not local studies or approvals. They retain the city editions as concept documents. The engineering handbook provides the common technical detail.

CONCEPT BY SERGE FORTIN
Revision 01 / 18 October 2026



Choose the city. Attach its four pages.

Page ranges refer to this combined PDF. Each individual addendum retains labels A1 to A4.

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Distribution: send the city brochure together with its addendum and the revised engineering handbook. Full brochure reissue should follow selection of a real site and a defined project scope.

Mahón / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Mahón / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Port-edge civic parcel

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Edge-of-town municipal site

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Reused building with parking or service ventilation

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Port edge and municipal landscape.

Public lighting and protected junction power. Seasonal water resilience and public refill demonstration. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Mahón / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check airport safeguarding, harbour views, salt exposure and public access before selecting height.

WATER AND DRAINAGE

Screen seasonal atmospheric water using hourly humidity and temperature. Keep a clean intake remote from port or parking exhaust.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Mahón / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: EUR 5-9M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Balearic Government - Maó Air Quality Improvement Plan 2021 (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Barcelona / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

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Barcelona / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Municipal parking structure

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Port or cruise mobility interface

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Dense district climate-refuge plaza

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Parking canopy or port mobility garden.

Heat refuge and shaded public space. Drought-aware water reuse and rain capture. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Barcelona / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Study street canyon turbulence, neighbours, shade and safe access above parking operations.

WATER AND DRAINAGE

Prioritize efficient irrigation and rain or reuse storage. Compare any atmospheric water with available local supply.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Barcelona / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

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Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: EUR 7-15M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Barcelona City Council - new Climate Plan (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Paris / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

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Paris / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Redeveloped square with underground parking

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Transit interchange or depot edge

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Bioclimatic school or cultural campus

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Compact garden beside parking ventilation.

Urban heat and cooling refuge. Traffic exposure and filtered occupied zones. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Paris / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check protected views, below ground structures, acoustic receptors and maintenance crane access.

WATER AND DRAINAGE

Develop a rain reuse and planting water balance. Treat atmospheric water as an optional research load.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Paris / Allowances and evidence

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Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

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Reconcile scope before adding costs

Earlier city envelope: EUR 8-17M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Paris - Climate Plan 2024-2030 (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

London / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

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London / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Transport interchange

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Underground parking redevelopment

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Civic square with cool-space program

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Transport forecourt and filtered pavilion.

Air-quality-positive public realm. Heat and drought resilience. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

London / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Map building downwash, pedestrian wind, subsurface utilities and transport evacuation routes.

WATER AND DRAINAGE

Size rain channels and overflow against local storm data. Compare water harvesting with reuse and network supply.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

London / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: GBP 8-18M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 London City Hall - London Environment Strategy (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Madrid / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

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Madrid / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Transport plaza with parking exhaust

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Heat-vulnerable civic district

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Ring-road or tunnel infrastructure interface

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Shaded plaza with parking interface.

Extreme heat and shaded refuge. High-yield solar and backup power. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Madrid / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Test shade at occupied hours, PV temperature losses, glare and leaf motion above busy pedestrian routes.

WATER AND DRAINAGE

Measure dry season humidity before selecting atmospheric water. Provide a reliable refill supply independent of that module.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Madrid / Allowances and evidence

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Energy Leaf package allowances

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Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: EUR 7-16M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Madrid City Council - Climate Adaptation Action Plan (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Oslo / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



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Oslo / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Tunnel portal or ventilation stack

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Transit interchange

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Municipal parking and charging hub

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Tunnel or municipal mobility interface.

Tunnel and controlled transport air. Road dust and winter operations. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Oslo / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Define snow, icing, low temperature, snow clearance and tunnel emergency operating cases.

WATER AND DRAINAGE

Drain vulnerable channels before freezing. Evaluate stormwater use; do not budget atmospheric water as winter supply.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Oslo / Allowances and evidence

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Reconcile scope before adding costs

Earlier city envelope: NOK 95-210M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Oslo - Climate Strategy towards 2030 (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Stockholm / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



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Starting configuration for a compact demonstrator.



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Stockholm / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Waterfront mobility node

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Parking and charging garden

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Depot or tunnel-adjacent public realm

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Waterfront parking and charging garden.

Climate-positive public infrastructure. Road dust and transport interfaces. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Stockholm / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check snow loads, ice fall zones, waterfront exposure and seasonal shading around the crown.

WATER AND DRAINAGE

Separate road runoff from the cleaner catchment. Size storage for landscape demand and winter shutdown.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Stockholm / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: SEK 90-190M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Stockholm - environment and climate (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Helsinki / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Helsinki / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Transit interchange

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Hospital or university campus

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Parking and charging garden

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Transit or campus public service garden.

Street dust and transport exposure. Winter durability and safe maintenance. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Helsinki / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Qualify bearings, seals, batteries and controls for cold operation; define safe snow and ice handling.

WATER AND DRAINAGE

Make freeze drainage and inspection access central to the water design. Screen rain reuse before atmospheric production.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Helsinki / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: EUR 8-17M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Helsinki - environmental protection objectives (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Geneva / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Geneva / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Transit interchange

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Waterfront civic site

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Structured parking redevelopment

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Lakefront or transit civic garden.

Climate comfort in public space. Solar transition and civic visibility. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Geneva / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check view corridors, local wind exposure, visitor routes and the capacity of any reused parking structure.

WATER AND DRAINAGE

Compare rain reuse with the proposed water service. Confirm quality and intended use before connecting any public tap.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Geneva / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: CHF 9-19M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

- C1 Canton of Geneva - Climate Plan (context source from original city edition)
- T1 IEC 62817, solar tracker qualification, 2026 consolidated edition
- T2 US DOE, Small Wind Guidebook: resource and siting
- T3 WHO, Water Safety Plan Manual, second edition

Rome / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Rome / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Mobility hub outside sensitive core

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Municipal campus or park

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Parking redevelopment near visitor routes

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Mobility garden outside sensitive monuments.

Heat-island mitigation and shade. Water shortage and efficient landscape. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Rome / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Screen heritage views, archaeology, below ground services and maintenance access before choosing a foundation.

WATER AND DRAINAGE

Integrate efficient landscape irrigation and rain storage. Test atmospheric water only against a defined seasonal need.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Rome / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: EUR 7-17M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Roma per il Clima - Climate Adaptation Strategy (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Athens / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

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Athens / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Dense-neighborhood cooling haven

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Transport plaza

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Municipal park or school cluster

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Neighbourhood cooling and hydration garden.

Extreme heat and cooling havens. High-yield solar and emergency circuits. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Athens / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Study occupied shade, hot surface temperatures, dust cleaning and the need for structural seismic design.

WATER AND DRAINAGE

Prioritize dependable hydration and efficient planting. Model atmospheric water under dry season conditions, not annual averages.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Athens / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: EUR 6-15M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Athens - Climate Action Plan overview (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Berlin / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Berlin / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Transit-adjacent neighborhood center

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Parking and charging garden

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Sponge-city redevelopment parcel

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Neighbourhood rain garden and mobility node.

Sponge-city water management. Urban heat and public-space comfort. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Berlin / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check neighbours, tree shade, below ground constraints and maintenance access within the public landscape.

WATER AND DRAINAGE

Assess infiltration suitability, rain storage and overflow. Keep contaminated parking runoff on its own treatment route.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Berlin / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: EUR 7-16M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Berlin - Urban Development Plan Climate 2.0 (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Montréal / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Montréal / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Metro or intermodal hub

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Municipal parking and charging garden

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Climate-vulnerable neighborhood civic site

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Municipal parking or transit resilience garden.

Winter durability, snow and safe maintenance. Heat, flooding and neighborhood resilience. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Montréal / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check freeze and thaw cycles, ice fall, salt, snow clearance and low temperature component limits.

WATER AND DRAINAGE

Separate salt laden snowmelt from clean roof runoff. Include drain down, tank temperature and winter maintenance.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Montréal / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: CAD 9-20M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Ville de Montréal - Montréal Climate Plan (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Toronto / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Toronto / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Transit interchange

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

City facility or community campus

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Parking and charging redevelopment

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Community campus or transit resilience hub.

Wildfire-smoke response and clean refuge. Extreme heat, storms and lake-city resilience. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Toronto / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check snow, ice, gust exposure and storm recovery access. Protect the refuge from outdoor intake recirculation.

WATER AND DRAINAGE

Evaluate stormwater detention and reuse with local flood data. Do not rely on atmospheric production during cold periods.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Toronto / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: CAD 9-20M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Toronto - Climate Ready Toronto (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

New York City / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

New York City / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Community resilience hub

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Transit or depot interface

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Parking redevelopment and public plaza

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Community hub over controlled parking.

Extreme heat and environmental justice. Stormwater and coastal resilience. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

New York City / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Verify tower support over existing structures, subsurface services, street canyon wind and emergency access.

WATER AND DRAINAGE

Set tank, plant and overflow levels from the selected site flood assessment. Separate potable and stormwater services.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

New York City / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: USD 10-24M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

- C1 New York City - PlaNYC 2023 (context source from original city edition)
- T1 IEC 62817, solar tracker qualification, 2026 consolidated edition
- T2 US DOE, Small Wind Guidebook: resource and siting
- T3 WHO, Water Safety Plan Manual, second edition

Los Angeles / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Los Angeles / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Heat-vulnerable community park

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Transit or park-and-ride site

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Municipal campus with stormwater capture

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Shaded transit plaza or neighbourhood park.

Extreme heat, shade and hydration. Drought, stormwater capture and local water. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Los Angeles / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Include seismic design, hot weather losses, dust and smoke operations; keep public routes clear of moving modules.

WATER AND DRAINAGE

Compare rain capture, reuse and dependable refill water. Screen atmospheric production against dry season conditions.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Los Angeles / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: USD 9-22M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Los Angeles - Climate Action Plan 2026 (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Hong Kong / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Hong Kong / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

MTR or bus interchange

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Public housing or civic podium

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Parking or tunnel ventilation interface

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Transit podium or controlled ventilation garden.

Dense transport and roadside exposure. Heat, humidity and shaded public space. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Hong Kong / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Design for the site storm wind basis, corrosion, facade interactions, limited lifting access and safe locked positions.

WATER AND DRAINAGE

Test intense rainfall overflow and leak containment on podiums. Compare atmospheric water with network and rain options.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Hong Kong / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: HKD 80-190M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Hong Kong EPD - policy documents and Climate Action Plan 2050 (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Tokyo / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Tokyo / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Station district plaza

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Municipal disaster-preparedness park

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Structured parking or civic campus

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Station district or disaster preparedness park.

Heat, humidity and cooling refuge. Earthquake and disaster continuity. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Tokyo / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Coordinate seismic design, storm wind, evacuation space and fail safe parking of all moving components.

WATER AND DRAINAGE

Prioritize emergency reserves and protected distribution. Test any atmospheric module over the intended seasonal operating window.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Tokyo / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: JPY 1.2-2.8B.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Tokyo Metropolitan Government - Zero Emission Tokyo strategy (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Johannesburg / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Johannesburg / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Community service hub

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Taxi or bus interchange

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Municipal campus with water storage

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Community service or transport hub.

Energy reliability and protected public services. Water security, drought and leakage. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Johannesburg / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Define critical loads, secure access, lightning protection, dust exposure and service arrangements with a named operator.

WATER AND DRAINAGE

Compare leak reduction, reliable storage, rain capture and atmospheric water. Meter water yield and energy separately.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Johannesburg / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: ZAR 120-300M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Johannesburg - Climate Action Plan (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Sydney / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Sydney / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Waterfront civic destination

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Parking and charging garden

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Transit or municipal campus

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Waterfront civic or parking garden.

Heat, shade and climate-resilient public realm. Alternative water and stormwater health. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Sydney / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check coastal corrosion where relevant, design wind, public access and smoke refuge operating requirements.

WATER AND DRAINAGE

Plan rain and alternative water use with local water quality and demand data. Keep public drinking supply independently safe.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Sydney / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: AUD 12-28M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 City of Sydney - Environmental Strategy 2025-2030 (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Mumbai / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Mumbai / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Rail or bus interchange

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Flood-aware neighborhood park

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Municipal campus or parking redevelopment

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Transit or flood aware civic garden.

Monsoon flooding and rainwater management. Heat, humidity and shaded refuge. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Mumbai / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check rainfall intensity, flood levels, corrosion, drainage blockage and access for maintenance during wet periods.

WATER AND DRAINAGE

Make overflow and flood isolation explicit. Compare humid season atmospheric water with rain storage and reliable network service.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Mumbai / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: INR 0.7-1.8B.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Municipal Corporation of Greater Mumbai - Climate Action Plan (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Shenzhen / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Shenzhen / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Metro or bus interchange

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Innovation campus

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Sponge-city park or parking garden

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Transit or innovation campus rain garden.

Sponge-city water management. Heat, humidity and typhoon resilience. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Shenzhen / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check storm wind, parked leaf loads, heavy rainfall, corrosion and integration with pedestrian and mobility routes.

WATER AND DRAINAGE

Prioritize detention and rain reuse. Measure atmospheric water performance and treatment needs before adding public drinking service.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Shenzhen / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: CNY 55-140M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Shenzhen Government - Sponge City Regulations (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition

Shanghai / The updated Flower family

Four pages to attach to the existing city edition. Architectural options, proposed applications and engineering questions.



A1 / ONE LEAF

Starting configuration for a compact demonstrator.



A2 / TWO LEAVES

Civic option with two independently managed modules.



A3 / THREE LEAVES

Flagship option subject to structure and operating value.



B / ALTERNATIVE CROWN

Optional upright crown, shown here with two leaves.

How to use this addendum

Attach after page 30 of the existing city brochure. This revision supersedes earlier crown and leaf illustrations where inconsistent. City proposals remain concept studies; no parcel, height or supplier is approved. The pictures show a generic setting, not a rendering of this city. Zero leaves remains available when moving modules add insufficient value.

Shanghai / Where the concept could fit

Candidate site types inherited from the city edition. The choices below are design proposals, not confirmed projects.

Transit interchange

Start with one leaf and the original crown. Define one measurable public service before adding optional equipment.

Sponge-city park

Consider two leaves if space, access and the measured resource justify them. Keep fixed solar areas in the energy plan.

Parking or innovation district redevelopment

Study three leaves only for a justified destination or research programme. Check the public value against greater complexity.

Local programme emphasis

Transit garden or parking redevelopment.

Flooding, rainfall and sponge-city systems. Heat, humidity and public-space comfort. These are objectives to test against the chosen site and operator.

Tourism, parking and public life

A park, viewing experience, education display and cafe or wine bar can accompany the technical base. No cooking is included. Separate visitors from machinery, exhaust outlets and maintenance. Parking beautification must preserve circulation, accessible routes and emergency access.

Visitor revenue, identity and community trust are potential outcomes. Establish attendance, operating margin, accessibility and public satisfaction measures before assigning financial value.

Shanghai / Engineering priorities

Use these questions to scope feasibility work. No new local resource measurements or permit determinations are supplied.

STRUCTURE AND MOTION

Check site flood levels, storm wind, drainage capacity, surrounding buildings and maintenance access.

WATER AND DRAINAGE

Develop stormwater storage and safe overflow before water production. Compare atmospheric water with rain and network options.

SOLAR AND STORAGE

Model crown, leaf and fixed canopy PV with hourly shading and demand. Size protected circuits and storage from required autonomy; annual solar balance does not establish night or outage supply.

CIRCULAR WIND ROTORS

Measure wind at each proposed rotor location. Evaluate rotor axis alignment, wakes, noise, braking and storm stow. Select one leaf first; retain a solar and rain only alternative.

AIR AND PEOPLE

Connect treatment to a controlled ventilation source or a physically defined filtered refuge. Measure capture and exposure separately. Keep the clean atmospheric water intake independent of polluted air systems.

OPERATIONS AND HEIGHT

Name the maintainer and define safe lifting and isolation. The 30 to 50 m landmark remains an aspiration, not a requirement; retain lower pilot options and obtain site specific height approval.

Shared detail: leaf channels > screened root outlet > movement compatible drain > separate downpipe > treatment and storage. Verify drainage at all allowed positions; keep wet services away from electrical enclosures. [T1, T2, T3]

Shanghai / Allowances and evidence

All amounts below are inherited concept allowances without supplier validation. They are not a tender estimate or a financing basis.

Energy Leaf package allowances

One leaf: EUR 180,000 to 450,000.
Two leaves: EUR 320,000 to 800,000.
Three leaves: EUR 450,000 to 1,200,000.

Packages cover proposed assemblies and local interfaces. Exclude main tower, foundations, visitor base, plant, land, taxes and site works. No crown alternative price difference is established.

Reconcile scope before adding costs

Earlier city envelope: CNY 60-150M.
This refers to the wider city concept, not a leaf package or a ground rig. Do not add the ranges until included equipment and overlaps are identified. No currency conversion or inflation update is applied.

New total = retained scope + selected changes + local integration + project risk allowance.

Suggested first commission: one leaf integration study and ground rig. The previous EUR 150,000 to 500,000 test programme allowance has not been validated. Seek separate quotes for design, fabrication, testing, site works, commissioning and annual maintenance.

Benefits to measure: net kWh and avoided purchases; water volume and energy per litre; captured pollutant mass or refuge exposure; visitor margin, maintenance costs, public access and independently surveyed trust. No reputational premium is monetized here.

REFERENCES AND PROVENANCE

C1 Shanghai Government - Climate Resilience Action Plan progress (context source from original city edition)

T1 IEC 62817, solar tracker qualification, 2026 consolidated edition

T2 US DOE, Small Wind Guidebook: resource and siting

T3 WHO, Water Safety Plan Manual, second edition