

Complete guide to the solar installation process. Learn the 7 essential steps, timeline expectations, costs, and what to expect from planning to power-on. Updated 2025.

Discover the full solar installation process from start to finish. This guide includes all the steps for installing solar panels, cost insight

Solar Panel Installation Guide - Step by Step Process Explained with Diagram, Training Video.

Learn the essential steps for solar panel installation, including site assessment, permits, and safety tips for a successful setup.

About the Renewable Energy Ready Home Specifications Assumptions of the RERH Solar Photovoltaic Specification Builder and Specification Limitations 1.5 Document the solar resource potential at the designated array location 3.3 Install a conduit for the AC wire run from the designated inverter location to the electric service panel 4.2 Record the name and Web address of the electric utility service provider 5.1 Landscape Plan 5.2 Placement of non-array roof penetrations and structural building elements Appendix A: RERH Labeling Guidance The Renewable Energy Ready Home (RERH) specifications were developed by the U.S. Environmental Protection Agency (EPA) to assist builders in designing and constructing homes equipped with a set of features that make the installation of solar energy systems after the completion of the home's construction easier and less expensive. The specifications... See more on #b_results

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.b_vidAns{border-radius:6px;box-shadow:0 0 0 1px rgba(0,0,0,.05);padding:16px 20px;gap:10px;background:#fff}@charset "UTF-8";#b_results
.b_ans.b_vidAns{box-shadow:none!important;padding:var(--smtc-gap-between-content-medium) 0!important;background:var(--bing-smtc-background-ctrl-fade-on-image-stop-0)}#b_results #serpvidans.vsacf
.mc_vtvc,#b_results #serpvidans.vsacf .mc_vtvc_th,#b_results #serpvidans.vsacf .cico,#b_results
#serpvidans.vsacf .mc_vtvc_htb,#b_results #serpvidans.vsacf .vrhc,#b_results #serpvidans.vsacf
.vrhcp,#b_results #serpvidans.vsacf .vrhtc,#b_results #serpvidans.vsacf
.vrhtpc{border-radius:var(--mai-smtc-corner-list-card-default)}#b_results #serpvidans.vsacf .mmlist
.mc_vtvc,#b_results #serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta{margin:0}#b_results
#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_channel,#b_results #serpvidans.vsacf
.mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_row_channel{color:var(--smtc-foreground-content-neutral-primary)}#serpvidans.vsacf,#serpv
idans.vsacf .expctn .expbody,#serpvidans.vsacf
.mmlist{display:flex;flex-direction:column;gap:var(--smtc-gap-between-content-medium)}#serpvidans.vsacf
.cico{height:auto}#serpvidans.vsacf .mc_vtvc_ban_lo{top:0;right:auto}#serpvidans.vsacf .mc_cwvc .mc_vtvc
.mc_vtvc_meta,#serpvidans.vsacf .mmlist .mc_vtvc
.mc_vtvc_meta{height:auto;padding:var(--smtc-gap-between-content-xx-small) 0
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var(--smtc-gap-between-content-xx-small)
var(--smtc-gap-between-content-medium);display:flex;flex-direction:column;justify-content:space-between}#
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.mc_vtvc_meta
.mc_vtvc_title{color:var(--smtc-ctrl-link-foreground-brand-rest);font:var(--bing-smtc-text-global-body2);heig
ht:auto;display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}#serpvidans.vsacf .mc_cwvc
.mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block{display:flex;flex-direction:column;gap:var(--smtc-padding-ctrl-text-side)}#serpvidans.
vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area .mc_vtvc_meta_row,#serpvidans.vsacf
.mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row,#serpvidans.vsacf .mmlist
.mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area .mc_vtvc_meta_row,#serpvidans.vsacf .mmlist
.mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row
.mc_vtvc_meta_row{color:var(--smtc-foreground-content-neutral-primary);height:var(--mai-smtc-padding-car
d-default);font:var(--bing-smtc-text-global-caption1)}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before,#serpvidans.vsacf
.mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row
.mc_vtvc_meta_row_channel::before,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before,#serpvidans.vsacf
.mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row
.mc_vtvc_meta_row_channel::before{content:" ? "}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block
.mc_vtvc_meta_pubdate{color:var(--bing-smtc-foreground-content-neutral-tertiary);padding-bottom:0}.vsacf
.mc_cwvc .mc_vtvc_con_rc,.vsacf .mmlist .mc_vtvc_con_rc{display:flex}.vsacf .mc_cwvc .mc_vtvc_con_rc
.mc_vtvc_meta_w,.vsacf .mmlist .mc_vtvc_con_rc .mc_vtvc_meta_w{height:auto}.vsacf
.b_title{padding-left:var(--mai-smtc-padding-card-default)}.vsacf .b_title
.mmtitle{font:var(--bing-smtc-text-global-subtitle1-strong);margin-bottom:0}.vsacf .b_title .mmtitle
a::after{content:"";margin:5px 5px 0 0;border-top:2px solid
var(--smtc-foreground-content-neutral-primary);border-right:2px solid
var(--smtc-foreground-content-neutral-primary);background-size:7px
7px;width:7px;height:7px;transform:rotate(45deg);display:inline-block;margin-left:4px}#serpvidans.vsacf
.b_title .mmtitle{margin-bottom:0}#serpvidans.vsacf .b_title .mmtitle
a{color:var(--smtc-foreground-content-neutral-primary)}#serpvidans.vsacf .cardless.mmlist
.mc_vtvc_con_rc,#serpvidans.vsacf .cardless.mmlist .mc_vtvc_th{height:auto}#serpvidans.vsacf
.vsb_tr_c.va_tt{margin:0}#serpvidans.vsacf .vtbc .mv_vtvc_play,#serpvidans.vsacf .vtbc
.mv_vtvc_play_ext{position:static}#serpvidans.vsacf .va_tt
.mc_vtvc_ban_lo{display:block}#serpvidans.vsacf

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.mc_bc{width:auto;border-radius:var(--smtc-ctrl-badge-sm-corner);padding:var(--smtc-padding-ctrl-text-side)
var(--smtc-gap-between-content-xx-small)}#serpvvidans.vsacf .rmts .mc_bc
ems{display:none}#serpvvidans.vsacf a.vsb_tr_t{color:var(--smtc-foreground-content-neutral-primary)}.vsacf
.va_tt .vsb_tr_chd .mc_vtvc_th_dock.rmoveoverlay{height:36px}.vsacf .va_tt .vsb_tr_chd
.mc_vtvc_th_dock{height:92px;background:linear-gradient(180deg,var(--bing-smtc-background-ctrl-fade-on-i
mage-stop-0) 0%,var(--mai-smtc-background-ctrl-on-image-rest) 100%)}.vsacf .va_tt a.vsb_tr_t{padding:0
20px;font:var(--bing-smtc-text-global-body-2-alt-strong)}.vsacf .va_tt .vsb_tr_chd .mc_vtvc
.mc_vtvc_meta,.vsacf .va_tt .vsb_tr_chd .mc_vtvc
.mc_vtvc_title{color:var(--mai-smtc-foreground-ctrl-on-image-rest)}.vsacf
span.vcmt_ctt{font:var(--bing-smtc-text-global-caption2);margin:var(--smtc-gap-between-content-xx-small) 0
0;height:16px}#serpvvidans.vsacf .vsb_tr_chd .mc_vtvc_tot .mc_vtvc_title
strong{font-size:14px;line-height:20px;display:unset}#serpvvidans.vsacf .va_tt .b_sldrp
.slide:not(:first-child){margin-left:var(--smtc-gap-between-content-small)}#serpvvidans.vsacf .va_tt
.vsb_tr_chd .mc_vtvc
.mc_vtvc_title{white-space:normal;display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}#se
rpvidans.vsacf .b_module_expansion_control .b_btnContainer
.b_CompactExpansion{background-color:var(--bing-smtc-background-ctrl-neutral-rest);display:flex;justify-co
ntent:center;align-items:center;gap:4px;width:fit-content;height:auto;padding:8px 12px}#serpvvidans.vsacf
.b_module_expansion_control .b_btnContainer .b_CompactExpansion
.b_CompactExpansionBtnText{font:var(--bing-smtc-text-global-caption1-strong);color:var(--bing-smtc-foregr
ound-content-brand-rest)}#serpvvidans.vsacf .b_module_expansion_control .b_btnContainer
.b_CompactExpansion .b_arrow{display:flex;margin:0;height:auto}#serpvvidans.vsacf
.b_module_expansion_control .b_btnContainer .b_CompactExpansion .b_arrow
path#Shape{fill:var(--bing-smtc-foreground-content-brand-rest)}#serpvvidans.vsacf
.b_module_expansion_control
.b_btnContainer::after{content:"";position:absolute;width:100%;bottom:20px;left:0;height:1px;border-radius:
1px;background:var(--smtc-stroke-ctrl-on-neutral-rest)}#b_results
.b_ans.b_vidAns{box-shadow:none;padding:12px 20px 0}#b_results .b_ans.b_vidAns
.vasac{padding:unset;margin:0}#b_results .b_ans.b_vidAns .vsa .b_attribution{padding-bottom:0}#b_results
.b_ans.b_vidAns .cardless .salink{margin:0}#b_results .b_ans.b_vidAns .mmlist
.mc_vtvc{margin-top:10px}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc
.mc_vtvc_meta{display:flex;flex-direction:column;justify-content:space-between;margin:0 10px 4px
12px}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_channel{color:#111}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_row_channel,#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area{color:#666}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area{bottom:0;height:unset}.b_dark .vsa.cardless
.mc_vtvc{background-color:unset}.mmtitle>a{display:block}.mc_fh{height:100%;border-radius:6px}.mc_tc_
bs{overflow:hidden}.mmlist .mc_vtvc .mc_vtvc_meta { padding: 12px 16px 16px 16px; } .mmlist .mc_vtvc
.mc_vtvc_meta_w { height: 112px; margin-top: -0px; } .mmlist .mc_vtvc .mc_vtvc_title { height: 44px;
line-height: 22px; margin-bottom: 0px; margin-top: 0px; } .mmlist .mc_vtvc .mc_vtvc_meta_block_area {
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height: 40px; } .mmlist .mc_vtvc .vtmu, .mmlist .mc_vtvc .vtpl { bottom: 120px; } .mmlist .mc_vtvc_th_dock
{ height: 112px; } .mmlist .mc_vtvc_th .cico { height: 131px; }
.mc_vtvc{background-color:#fff;box-shadow:0 0 0 1px
rgba(0,0,0,.05);line-height:0;margin:0;position:relative;border-radius:6px;overflow:hidden}.mc_vtvc.noshado
w{box-shadow:none}.mc_vtvc_con_rc{border-radius:6px;overflow:hidden;position:relative}.mc_vtvc>a{colo
r:#71777d;display:block;text-decoration:none;width:100%}.mc_vtvc>a:focus::after{outline:2px solid
#00a89d;width:100%;height:100%;content:"";outline-offset:-2px;position:absolute;top:0;left:0}.mc_vtvc_th{ba
ckground-color:#d5d5d5;position:relative}.mc_vtvc_th
.cico{border-radius:0}.mc_vtvc_ban_lo,.mc_vtvc_ban_up{position:absolute;vertical-align:middle}.mc_vtvc_
ban_lo{bottom:0}.mc_vtvc_ban_up{top:0}.mc_vtvc_title{font-weight:normal;margin-bottom:11px;overflow:
hidden;color:#111;height:54px;line-height:18px}.mc_vtvc_title
a{display:inline-block;color:#111}.mc_vtvc_title
a:hover{text-decoration:underline}.mc_vtvc_src_ico{float:left;margin-right:4px}.mc_vtvc_act{height:16px;m
argin-top:-40px;padding:12px
8px;z-index:1}.mc_vtvc_actc{right:16px;bottom:16px;position:absolute;display:inline-block;z-index:1}.mc_v
tvc_act_sep{border-top:1px solid #d5d5d5;height:40px;margin:0 8px}.mc_vtvc_fh
.mc_vtvc_act_sep,.mc_vtvc_fh
.mc_vtvc_act{visibility:hidden}#serpvidans
.b_topTitle{margin-bottom:8px}.mc_vtvc_htc{width:100%;height:100%;position:absolute;top:0;bottom:0;left
:0;right:0}.mc_vtvc_htb{width:100%;height:100%;background:rgba(0,0,0,.7);position:absolute;top:0;bottom:
0;left:0;right:0}.mc_vtvc_ht{width:100%;padding:0
16px;line-height:16px;color:#fff;text-decoration:underline;word-break:break-word;box-sizing:border-box;vert
ical-align:middle;text-align:center}.mc_vtvc_th_live_b{background-color:#c80000;color:#fff;display:inline-bl
ock;padding:2px 8px;font:11px/14px
Arial;border-radius:2px;text-transform:uppercase;height:15px;width:26px;position:absolute;left:8px;top:110p
x}.isvctrl
.isv
.mc_vtvc_ban_up{left:0;right:initial}.mc_vtvc_ban_lo,.mc_vtvc_ban_up{right:0}.vt_text.b_lRight
.b_lLeft{margin:0 0 0 1px;height:14px;line-height:14px;padding:2px
8px;background:rgba(0,0,0,.75);border-radius:2px;font-weight:bold}.mc_vthtb{width:100%;height:100%;bac
kground:rgba(0,0,0,.7);position:absolute;top:0;bottom:0;left:0;right:0;display:table}.mc_vtht{width:100%;pad
ding:0
16px;line-height:16px;color:#fff;text-decoration:underline;word-break:break-word;box-sizing:border-box;vert
ical-align:middle;text-align:center;display:table-cell}.vt_text.b_lRight
.b_lLeft{margin:0 0 0
1px;height:14px;line-height:14px;padding:2px
8px;background:rgba(0,0,0,.75);border-radius:2px;font-weight:bold}.emptyStyleForDebuggingPurpose{top:0
}.emptyStyleForDebuggingPurpose{top:0}.mc_vtvc_center_play{width:32px;height:32px;background-size:c
ontain;position:absolute;margin:auto;bottom:0;top:0;left:0;right:0;box-shadow:none;border-radius:0}.mc_vtvc
_center_play.rmvbg{width:32px;height:32px;background-image:none}.mc_vtvc_htb,.mc_vtvc_ht{display:no
ne}.vt_onhv
.mc_vtvc_htb{display:table}.vt_onhv
.mc_vtvc_ht{display:table-cell}.mc_vtvc_center_play{display:inline-block}.vt_onhv
.mc_vtvc_center_play{display:none}.mc_vtvc .vtmu,.mc_vtvc .vtpl{bottom:163px}.vsarf .mc_vtvc
.vtmu,.vsarf .mc_vtvc .vtpl{bottom:122px}.svarh #mmcar .mc_vtvc .vtmu,.svarh #mmcar .mc_vtvc

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.vtpl{bottom:137px}.svarht #mmcar .mc_vtvc .vtmu,.svarht #mmcar .mc_vtvc
.vtpl{top:8px;left:8px}.mc_vtvc_center_play{background-image:url(data:image/svg+xml,%3Csvg%20width
%3D%2232%22%20height%3D%2232%22%20viewBox%3D%220%200%2032%2032%22%20fill%3D%22
none%22%20xmlns%3D%22http%3A%2F%2F%2F2000%2Fsvg%22%3E%0D%0A%20%20%20%20%3Cr
ect%20width%3D%2232%22%20height%3D%2232%22%20rx%3D%2216%22%20fill%3D%22black%22%
20fill-opacity%3D%220.6%22%2F%3E%0D%0A%20%20%20%20%3Cpath%20d%3D%22M14.2354%201
0.1923C13.2355%209.62986%2012%2010.3524%2012%2011.4997V20.5C12%2021.6472%2013.2355%202
2.3698%2014.2354%2021.8073L22.2356%2017.3073C23.2551%2016.7339%2023.2551%2015.2661%2022.
2357%2014.6926L14.2354%2010.1923Z%22%20fill%3D%22white%22%20fill-opacity%3D%220.9%22%2
F%3E%0D%0A%3C%2Fsvg%3E)}.mmlist .mc_vtvc{margin:10px 1px 0}.mmlist
.mc_vtvc_con_rc{display:flex}.cardless .mmlist .mc_vtvc_con_rc{height:112px}.mmlist .mc_vtvc
.mc_vtvc_meta{display:flex;flex-direction:column;justify-content:space-between;margin:0 10px 4px
12px;padding:0}.mmlist
.mc_vtvc_title{font-weight:400;font-size:16px;height:44px;line-height:22px;margin-bottom:0;margin-top:0;c
olor:unset}.mmlist .mc_vtvc_meta_row{font-size:13px}.mmlist .mc_vtvc
.mc_vtvc_meta_block_area{height:unset}.mmlist .mc_vtvc .vtmu,.mmlist .mc_vtvc
.vtpl{bottom:8px}.cardless .mmlist .mc_vtvc{box-shadow:none}.cardless.mmlist
.mc_vtvc_center_play{width:32px;height:32px}.cardless.mmlist
.mc_vtvc_title{font-size:16px;color:unset}.cardless.mmlist
.mc_vtvc_meta_row{line-height:20px}.cardless.mmlist
.mc_vtvc_meta_pubdate{padding-bottom:2px;color:#666}.cardless.mmlist .mc_vtvc_th,.cardless.mmlist
.mc_vtvc_th .cico,.cardless.mmlist .mc_vtvc_th div.rms_img{border-radius:6px}.cardless.mmlist
.mc_vtvc_th{height:111px}.cardless.mmlist
.mc_vtvc_htc{border-radius:6px;overflow:hidden}#serpvidans.vasac.cardless{box-shadow:none}.cardless.m
mmlist .mc_bc{padding:2px 8px;line-height:14px;border-radius:2px;font-weight:normal}.mmlist
.mc_vtvc: hover
.mc_vtvc_title{text-decoration:underline}.mc_vtvc_meta{box-sizing:border-box;display:inline-block;line-hei
ght:18px;position:relative;width:100%}.mc_vtvc_meta_block{bottom:0;position:absolute;width:100%}.mc_v
tvc_meta_row{line-height:16px;font-size:11px;height:17px;overflow:hidden;text-overflow:ellipsis;white-spac
e:nowrap}.mc_vtvc_meta_row a{display:inline-block}.mc_vtvc_meta_row
a:hover{text-decoration:underline}.mc_vtvc_meta_block_area{position:relative}.mc_vtvc_meta_block,.mc_v
tvc_meta_block a{color:#444}.b_dark
.mc_vtvc_meta_block{color:#edebe9}.mc_vtvc_meta_row>:nth-of-type(n+2)::before{content:" ?
"}.mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before{content:" >
"}.mc_vtvc_kmt_title{line-height:18px;padding-bottom:4px;font-weight:bold;color:#00809d;text-transform:u
ppercase;font-size:11px}.mc_vtvc_kmt,.mc_vtvc_con_rc.onhov .wkmt
.mc_vtvc_meta_row,.mc_vtvc_con_rc.onhov .wkmt .tbc_tt{display:none}.mc_vtvc_con_rc.onhov .wkmt
.mc_vtvc_title{max-height:18px;margin-bottom:18px;overflow:hidden}.mc_vtvc_con_rc.onhov.mmsts
.mc_vtvc_title{visibility:hidden}.mc_vtvc_con_rc.onhov
.mc_vtvc_kmt{display:block}.mc_vtvc_kmt_content
.b_factrow{line-height:17px;font-size:11px;max-height:34px;overflow:hidden;text-overflow:ellipsis;padding:
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0 16px 0 0;color:#444}.mc_vtvc_meta
.mc_vtvc_kmt_title{line-height:18px}.mc_vtvc_title:hover{text-decoration:none}.mc_vtvc_meta_pubdate{co
lor:#444;padding-bottom:3px}.mc_vtvc_meta_channel{color:#444}.mc_vtvc_meta_w,.mc_vplvc_meta_w{po
sition:relative}.mc_vtvc_meta_bg_w,.mc_vplvc_meta_bg_w{height:100%;width:100%;overflow:hidden;posit
ion:absolute;top:0}.mc_vtvc_meta_bg_w .cico,.mc_vplvc_meta_bg_w
.cico{border-radius:0;overflow:visible}.dg_u .mm_vidch_th_c{overflow:visible}.dg_u .mm_vidch_th_bg
img{margin-top:-20px}.emptyStyleForDebuggingPurpose{top:0}.mc_vtvc_meta_w
.mc_vtvc_meta{background:rgba(255,255,255,.75)}.mc_vtvc_meta_bg_w img,.mc_vtvc_meta_bg_w
.mc_vtvc_cb_w{filter:blur(25px);transform:scale(1.2)}body{--video-metadata-channel-color:#3c3c3c}body.b
_dark{--video-metadata-channel-color:unset}.vsarf .mc_vtvc_meta_pubdate{color:unset}.vsarf
.mc_vtvc_meta_channel{color:var(--video-metadata-channel-color)}.vsarf .mc_vtvc .mc_vtvc_meta_w
.mc_vtvc_title,.vsarf .mc_vtvc .mc_vtvc_meta_w .mc_vtvc_title strong{font-weight:bold}.vsarf
.mc_vtvc_meta_w .mc_vtvc_meta_row{font-size:13px}.emptyStyleForDebuggingPurpose{top:0}.vsarf
.mc_vtvc_th
.cico{height:132px}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.empt
yStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurp
ose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.vtbc
.mv_vtvc_play{display:inline-block;position:absolute;bottom:8px;left:9px;height:8px;width:7px}.vtbc
.mv_vtvc_play_ext{background:url(/rp/Lp38sn_O4jegSK0IHxZVxyp-yKQ.png) -172px
-31px;display:inline-block;height:8px;width:12px;position:absolute;bottom:8px;left:6px}.vtbc
.pivot{height:20px;width:8px;min-width:8px}.vtbc
.mv_vtvc_play{background:url(
MAAADHKvg1AAAAIvBMVEX//////////9/gMdvAAAACnRSTlMAETNEVWaImbv
uo4D1oAAAAB9JREFUCB1jmMoABKuaQcSqQhCxCkGFGgLnNQIkpQAwaA8zkLyQA16F0AAAAASUVO
RK5CYII=)}.mc_bc_w{height:18px;padding:8px;text-align:right}.mc_bc{background-color:rgba(0,0,0,.75);p
adding:2px
8px;line-height:14px;color:#fff;display:inline-block;vertical-align:middle;border-radius:2px;font-weight:bold}
.mc_bc_w .pivot{text-align:center;margin-right:1px;height:14px}.vsarr .mmgrid .mc_bc_w
.mc_bc{background-color:rgba(0,0,0,.75);opacity:1}.mmsi{height:16px;width:16px;position:relative;top:5px;
padding-right:var(--smtc-gap-between-content-xx-small)}.mmsi-microsoftnews,.mmsi-msn{top:3px}.vrhdata
{display:none}.mmgrid>div{width:197px;display:inline-block;margin-right:8px;margin-bottom:8px;box-shad
ow:0 0 0 1px
rgba(0,0,0,.05);position:relative;vertical-align:top;overflow:hidden;white-space:normal;border-radius:6px}.vs
arr .mmgrid>div,.vsarr1stbig .mmgrid>div{margin-right:8px;margin-bottom:8px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta{height:auto}#serpvidansrr .mc_vtvc
.mc_vtvc_title{display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}.mmgrid
.mc_tc{border:0}.vsa .mmgrid>div:nth-child(3n){margin-right:0}.vsa
.b_moreLink{padding-top:4px}#serpvidansrr
.mc_vtvc_meta_row{line-height:18px;font-size:100%;height:17px}.vsarr
.mmgrid>div:nth-child(2n){margin-right:0}#serpvidansrr .mc_vtvc .vtmu,#serpvidansrr .mc_vtvc
.vtpl{bottom:128px}.vsarr1stbig .mmgrid>div:nth-child(2){margin-right:0}#serpvidansrr.uipolish

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.mc_vtvc_meta_pubdate,#serpvidansrr.uipolish .mc_vtvc_meta_channel,#serpvidansrr.uipolish #vidans2
.b_videocard .video_metadata .video_source{color:#767676}#serpvidansrr #vidans2 .b_videocard
.video_metadata_container,#serpvidansrr #vidans2 .b_videocard .video_metadata_container
.video_metadata>h3{width:100%}@media(max-width:1362.9px){#serpvidansrr
.mmgrid>div{width:168px;height:206px}#serpvidansrr .mmgrid>div .cico,#serpvidansrr .mmgrid>div .cico
.rms_img{width:168px;height:100px}#serpvidansrr .mc_vtvc .mc_vtvc_meta{padding:12px}#serpvidansrr
.mc_vtvc .mc_vtvc_title{height:32px;line-height:16px;margin-bottom:16px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta_block_area{height:34px}#serpvidansrr
.mc_vtvc_meta_row{line-height:15px;font-size:13px;height:15px}#serpvidansrr
.mc_vtvc_meta_pubdate{padding-bottom:4px}#serpvidansrr .mc_vtvc .vtmu,#serpvidansrr .mc_vtvc
.vtpl{bottom:114px}#serpvidansrr #vidans2 .b_videocard .videoPlayer,#serpvidansrr #vidans2 .b_videocard
.videoPlayer .cico,#serpvidansrr #vidans2 .b_videocard .videoPlayer .cico
.rms_img{width:343px!important;height:194px!important;margin-right:0}}@media(max-width:1274.9px){#s
erpvidansrr .mmgrid>div{width:124px;height:164px}#serpvidansrr .mmgrid>div .cico,#serpvidansrr
.mmgrid>div .cico .rms_img{width:124px;height:76px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta{padding:8px}#serpvidansrr .mc_vtvc
.mc_vtvc_title{height:32px;line-height:16px;margin-bottom:12px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta_block_area{height:28px}#serpvidansrr
.mc_vtvc_meta_row{line-height:13px;font-size:11px;height:13px}#serpvidansrr
.mc_vtvc_meta_pubdate{padding-bottom:2px}#serpvidansrr .mc_vtvc .vtmu,#serpvidansrr .mc_vtvc
.vtpl{bottom:96px}#serpvidansrr #vidans2 .b_videocard .videoPlayer,#serpvidansrr #vidans2 .b_videocard
.videoPlayer .cico,#serpvidansrr #vidans2 .b_videocard .videoPlayer .cico
.rms_img{width:256px!important;height:144px!important;margin-right:0}#serpvidansrr .maskthumb
.mc_bc_w{padding:8px 4px 4px 8px}#serpvidansrr.withsplitline
.mmgrid>div:nth-last-child(1),#serpvidansrr.withsplitline
.mmgrid>div:nth-last-child(2){margin-bottom:24px}#serpvidansrr.withsplitline .mmgrid{border-bottom:1px
solid #ecec; margin-bottom:16px}#serpvidansrr #vidans2 .b_videocard
.video_metadata{max-width:auto;padding:12px 16px}#serpvidansrr #vidans2
.b_videocard{margin-bottom:12px;box-shadow:0 0 1px rgba(0,0,0,.05),0 2px 3px
rgba(0,0,0,.1);border-radius:6px}#serpvidansrr .b_rich{padding-top:0}#serpvidansrr #vidans2
.videoPlayer{border-radius:6px 6px 0 0;overflow:hidden}#serpvidansrr #vidans2 .b_videocard
.video_metadata>h3{white-space:nowrap;overflow:hidden;text-overflow:ellipsis;-webkit-line-clamp:1;line-he
ight:15px;height:15px;font-size:13px;color:#000;margin-bottom:20px;font-family:"Arial",Helvetica,Sans-Seri
f;font-style:normal;display:block}#serpvidansrr.vsarr1stbig #vidans2 .b_videocard .video_metadata
.actionmenu{display:none}#serpvidansrr #vidans2 .b_videocard .video_summary,#serpvidansrr #vidans2
.b_videocard .video_source{line-height:15px}#serpvidansrr #vidans2 .b_videocard .videoPlayer
.vtbc{right:0}.vrhc line.nhvpv .pffvi,.vrhc line.nhvpv[data-tps="S"] .pffvt,.vrhc line.nhvpv[data-tps="M"]
.pffvt,.vrhc line.nhvpv[data-tps="L"] .pffvt{display:inline-flex}.vrhc line.nhvpv .vrhtc.pffv
.vrhol{display:none}.vrhc line.nhvpv .vrhtc.pffv
.player_ol{background:var(--mai-smtc-background-ctrl-on-image-hover);transition:background-color
.5s;display:flex;align-items:center;justify-content:center;padding:var(--smtc-gap-between-content-x-small);ga
```

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p:var(--smtc-gap-between-content-x-small);box-sizing:border-box}.mc_vtvc_th      img{transition:all      .3s
ease-out}.nhvpv+.mc_vtvc_th
img{transform:scale(1.1)}.smtplayerhtml5{height:100%;width:100%;overflow:hidden}.smtplayerhtml5
video{min-height:100%;min-width:100%}.smtplayerhtml5
.videoplaying{background-color:#000}.smtplayerhtml5.hide{display:none}.pffvt{display:none;color:var(--ma
i-smtc-foreground-ctrl-on-image-rest);font:var(--bing-smtc-text-global-subtitle2-strong)}.pffvi{mask:url(/rp/ui
07wU6K7FR_inzG7DRbP1i8fGo.svg)                                center
no-repeat;mask-size:12px;background:var(--bing-smtc-background-card-on-image-default);width:20px;height
:20px;flex-shrink:0;align-self:flex-start}[data-tps="L"]
.pffvt{font:var(--bing-smtc-text-global-subtitle2-strong)}[data-tps="L"]
.pffvi{width:22px;height:22px;mask-size:16px}[data-tps="S"]                .pffvt{font-size:0}[data-tps="S"]
.pffvi{width:24px;height:24px;mask-size:24px;align-self:center}.hvpv.h5s
.pffvt{display:inline-flex}.hvpv.h5s      .vrhct.pffv      .vrhol{display:none}.hvpv.h5s      .vrhct.pffv
.player_ol{background:var(--mai-smtc-background-ctrl-on-image-hover);transition:background-color
.5s;display:flex;align-items:center;justify-content:center;padding:var(--smtc-gap-between-content-x-small);ga
p:var(--smtc-gap-between-content-x-small);box-sizing:border-box}.pffvt{text-decoration:underline}.vrhcp
.vrhol{position:absolute;width:100%;height:35px;max-height:35px;bottom:0;left:0;padding:0;background:non
e;display:block;z-index:9}.vrhcp      .vrhol.hide,.vrhcp      .vrhol
.hide{display:none}.vrhot{white-space:nowrap;text-overflow:ellipsis;overflow:hidden;display:inline-block;po
sition:absolute;max-width:240px;height:18px;line-height:14px;margin-left:8px;top:10px;left:0;right:0;border-
radius:2px;padding-right:8px}.vrhot      div{display:inline-block}.vrhot
nt{color:#fff;font-size:11px;font-weight:bold;background-color:rgba(0,0,0,.75);padding:2px
8px;margin-left:0;top:0;box-sizing:border-box;position:relative}.vrhc
.ricons{position:absolute;right:8px;top:10px;left:auto;bottom:auto;height:18px;display:inline-block;cursor:poi
nter}.vrhol.icons_1      .vrhot{margin-right:27px}.vrhol.icons_2      .vrhot{margin-right:49px}.vrhol.icons_3
.vrhot{margin-right:79px}.vrhol      .vrhot      nt,.vsb_tr_chd      .vrhol.icons_1
.vrhot{margin-right:0}.vpb{position:absolute;display:block;bottom:0;left:0;height:4px}.vpb
div{position:absolute}.vpb      nt{width:0;background:#fff}.vpb
nt.test{display:none}.vpb.back{background-color:#999}.vrhcp
.vrhol.npb{height:36px;max-height:36px}.vrhol
.vadda{width:22px;height:18px;padding:0;margin-right:0;margin-left:2px;bottom:0;position:relative;display:i
nline-block;z-index:1;background:rgba(0,0,0,.75);border-radius:2px;overflow:hidden}.vrhol
.vadda.hide{display:none}.vrhol      .vadda      .mc_vfaa{margin:3px      5px}.ricons      .vol{float:left}.ricons
.adultFlag{float:right}.vol{width:22px;height:18px;bottom:0;margin-left:1px;margin-right:1px;position:relati
ve;display:inline-block}.vol.hide,.vol      .hide{display:none}.vol
.bg{background:rgba(0,0,0,.75);border-radius:2px}.vol.bg,.vol      nt{position:absolute;bottom:0}.vol
.vol.bg.volnb{border-radius:0 0 2px 2px}.vol      .volsliderHandle.bg{border-radius:2px 2px 0 0}.vol      nt
.volsliderHandle{height:70px;display:none;width:22px;float:left;bottom:18px;position:absolute;display:block
}.vol      nt      .volsliderHandle.hide{display:none}.volsliderHandle
.vsb{height:54px;width:4px;background-color:#999;margin:9px      auto
8px;position:relative;display:block;border-radius:2px}.volsliderHandle

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.vsh{height:6px;width:14px;padding:9px 7px 9px 7px;margin:0
-12px;display:block;position:absolute;top:30px}.volsliderHandle .vsh.hide{display:none}.volsliderHandle
.vshi{height:4px;width:14px;background-color:#fff;border-radius:2px}.volMuteIcon{width:16px;height:14px;
margin:2px
4px;float:left}.volMuteHandle{width:22px;height:18px}.vo{background:url(/rp/ffZxBXEIP9WYOO0jhTaEl
yLhEVU.svg) no-repeat}.vm{background:url(/rp/fsX-ZVd03wB2TL0vmQJxSp4U9vs.svg)
no-repeat}.vl{background:url(/rp/YXYMPC1Rry_XJGc7Yg8lR4B2eEs.svg)
no-repeat}.vf{background:url(/rp/NoslR4amKTs1zYxWy3laZN3HRk.svg)
no-repeat}@media(forced-colors:active){.vol{forced-color-adjust:none}}.vrhc line .vt_vp,.vrhc.popout
.vt_vp,.vrhc.mousefollow
.vt_vp{position:absolute;bottom:0;border:hidden;padding:0;top:0;left:0;z-index:3}.vrhtc
.hide{display:none}.vrh_clc .vt_vp,.vrh_clc .vrhtc .vrhi,.vrh_clc .player_ol{cursor:pointer}.vrh_clc
.cico{border-radius:0}.vrhtc{border:hidden;top:0;left:0;padding:0}.vrhc.mousefollow .vrhtc,.vrhc.popout
.vrhtc{background-color:#999}.vrhtpc.load
.player_ol{background:url(/rp/J_o2maogFDeUOsovPjL-ofEuxJ4.gif) center center no-repeat}.vrhc line .vrhtc
.vrhi,.vrhc.popout .vrhtc .vrhi,.vrhc.mousefollow .vrhtc
.vrhi{position:absolute!important;border:hidden;z-index:2;padding:0;left:0;top:0}.player_ol{position:absolute
;width:100%;height:100%;bottom:0;border:hidden;z-index:7}.vrhc.popout,.vrhc
line,.vrhc.mousefollow{border-radius:6px;overflow:hidden;display:table-row-group;background:none}.vrhc.p
opout,.vrhc.mousefollow{z-index:4;box-shadow:0 4px 4px rgba(0,0,0,.1),0 2px 80px rgba(0,0,0,.2)}.vrhc
line{z-index:1;margin:0}.vrhc.popout,.vrhc line{position:absolute;top:0}.vrhc.popout{border:1px solid
#fff}.vrhc.mousefollow{position:fixed}.vrhcp{position:relative;top:0;left:0;display:table-row}.vrhcp
.vrhtc{position:relative;overflow:hidden}.vrhc.hide{display:none}@keyframes
vh_fadein{from{opacity:0}to{opacity:1}}.vrhc.not(.hide){animation:vh_fadein 250ms}.vrhc line
img{color:transparent}.vrhc
line.fullsize{height:100%}.vrhc,.vrhc: hover,.vrhc: link,.vrhc: active,.vrhc: visited{color:#000;text-decoration:no
ne}.vrhc.vrh_clc{cursor:pointer}a.hover-anchor{display:block;height:100%;width:100%;text-decoration:none
}.vrhstat{height:0;overflow:hidden}.vsb_tr_c{position:relative;width:100%;overflow:hidden;background:#1d
1b28;height:583px;margin-bottom:16px}.vsb_tr_c.tr_nh{height:294px}.vsb_tr_c .mm_vrc h2,.vsb_tr_c
.mm_vrc .see_more{display:none}.vsb_tr_c .mm_vrc>div{padding-bottom:20px}.vsb_tr_c
.vsb_tr_t{position:absolute;top:16px;left:160px;font:normal 16px/19px
"Arial",Helvetica,Sans-Serif;font-weight:700;color:#fff;z-index:1}.vsb_tr_c
.vsb_tr_t::after{width:17px;height:12px;display:inline-block;background-size:7px
12px;background-repeat:no-repeat;background-position-x:right;opacity:.7;content:""}.vsb_tr_c
.vsb_tr_t: hover::after{opacity:1}.vsb_tr_c .mm_vrc
.mc_vtvc{background-color:#585858;border-radius:6px}.vsb_tr_c .mm_vrc
.mc_vtvc_con_rc{border-radius:6px}.vsb_tr_c .vsb_tr_chd{position:absolute;bottom:0;width:100%}.vsb_tr_c
.onhov .mc_vtvc_ban_lo{display:none}.vsb_tr_chd .mc_vtvc_tot
.mc_vtvc_title{line-height:15px}.vsb_tr_chd .mc_vtvc_tot .mc_vtvc_meta_row,.vsb_tr_chd .mc_vtvc_tot
.mc_vtvc_meta_row a{color:#dadada}.vsb_tr_chd .grad_b{top:30%;height:auto}.vsb_tr_chd .mc_vtvc_tot
.mc_vtvc_meta_row{font-size:12px;line-height:16px;height:16px}.vsb_tr_chd .mc_vtvc_tot

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.meta_pd_content{display:none}.vsb_tr_chd .mc_vtvc_tot .mc_vtvc_title strong{font-weight:500}.vsb_tr_c
.slide video{object-fit:cover}.vsb_tr_c .mc_vtvc_th .cico{width:100%;height:100%}.vsb_tr_c
.vrhcac{width:647px;position:absolute;width:calc(42% - 160px);bottom:200px;margin:0 0 0
160px;height:auto;padding:0;pointer-events:auto}.vsb_tr_c .vrhcac .mc_vtvc_title{font:normal 30px/35px
"Arial",Helvetica,Sans-Serif;font-weight:700;height:70px;overflow:hidden;color:#fff;text-overflow:ellipsis;di
splay:-webkit-box;-webkit-box-orient:vertical;-webkit-line-clamp:2}.vsb_tr_c .vrhcac
.mc_vtvc_meta_block_area{height:50px;margin:12px 0 0 0}.vsb_tr_c .vrhcac
.mc_vtvc_meta_row{font:normal 13px/15px "Arial",Helvetica,Sans-Serif;margin:5px 0 5px
0;color:#dadada}.vsb_tr_c .mm_vrc .b_overlay .btn.bigrounded .cr>div,.vsb_tr_c .mm_vrc .b_overlay
.btn.bigrounded .cr>div:hover{background-image:url(/rp/qA6EopzJjTm5qQJvnXlrWGNP778.svg)}.vsb_tr_c
.vsb_tr_t::after{background-image:url(data:image/svg+xml,%3Csvg%20width%3D%227%22%20height%3D
%2214%22%20viewBox%3D%220%200%207%2014%22%20fill%3D%22none%22%20xmlns%3D%22http
%3A%2F%2F%2F2000%2Fsvg%22%3E%0D%0A%20%20%20%20%3Cpath%20d%3D%22M0.186925%2
01.19491L5.4643%207L0.186925%2012.8051C-0.0623082%2013.0792%20-0.0623082%2013.5214%200.18
6925%2013.7944C0.436158%2014.0685%200.838112%2014.0685%201.08628%2013.7944L6.81334%207.4
9465C6.93212%207.36515%207%207.18433%207%207C7%206.81567%206.93212%206.63485%206.8133
4%206.50535L1.08628%200.205616C0.837052%20-0.0685388%200.435097%20-0.0685388%200.186925%
200.205616C-0.0612477%200.479772%20-0.0623082%200.92192%200.186925%201.19491Z%22%20fill%
3D%22white%22%20fill-opacity%3D%220.7%22%2F%3E%0D%0A%3C%2Fsvg%3E%3E)}.va_tt
.mm_vrc{padding:11px 2px 0 0}.va_tt .vsb_tr_t{position:relative;top:auto;left:auto;font:normal 18px/22px
"Arial",Helvetica,Sans-Serif;font-weight:400;color:#4007a2;z-index:auto}.b_dark .va_tt
.vsb_tr_t{color:#82c7ff}.va_tt .vsb_tr_tp,.va_tt .vsb_tr_tl{display:inline-block;margin-right:5px}.va_tt
.vsb_tr_chd{position:relative}.vsb_tr_c.va_tt{--va-st-padding-bottom:16px;height:auto;background-color:tran
sparent;margin-top:22px;overflow:visible;padding-bottom:var(--va-st-padding-bottom);margin-bottom:0}.va_
tt .mc_vtvc_ban_lo,.va_tt .vsb_tr_t::after,.va_tt .mc_vtvc_hover .mc_vtvc_center_play,.va_tt .vsb_tr_chd
.vt_onhv .mc_vtvc .mc_vtvc_meta{display:none}.va_tt .mc_vtvc_hover .mc_vtvc_ht,.va_tt .mc_vtvc_hover
.mc_vtvc_htb{display:table-cell}.va_tt
.mc_vtvc_htb{padding-top:50px;background:linear-gradient(360deg,rgba(0,0,0,.6) 60.35%,rgba(0,0,0,0)
100%);font-size:11px;line-height:13px}.va_tt .mc_vtvc_ht{padding:0 24px;text-shadow:0 1px 2px
rgba(0,0,0,.2)}.va_tt .mc_vtvc_center_play{bottom:52px}.va_tt .mc_vtvc_hover
.mc_vtvc_title{max-height:52px;white-space:normal;display:-webkit-box;-webkit-box-orient:vertical;-webkit-
line-clamp:4}#serpvidans .va_tt .slide{margin-right:0;vertical-align:bottom;transition:width .2s,height
.2s}#serpvidans .va_tt .slide:not(:first-child){margin-left:8px}#serpvidans .va_tt
.mm_vrc>div{padding-bottom:0}.va_tt .vsb_tr_chd .mc_vtvc
.mc_vtvc_meta{height:auto;padding:8px;color:#ddd}.va_tt .vsb_tr_chd
.mc_vtvc_th_dock{height:72px;position:absolute;bottom:0;background:linear-gradient(360deg,rgba(0,0,0,.55)
60.35%,rgba(0,0,0,0) 100%)}va_tt
.mc_vtvc_meta_row_channel{font-size:13px;line-height:15px;font-weight:500;color:#fff;white-space:nowrap;
overflow:hidden;text-overflow:ellipsis;margin-bottom:6px}.va_tt .vsb_tr_chd .mc_vtvc
.mc_vtvc_title{height:auto;font-size:11px;line-height:13px;color:#ddd;white-space:nowrap;overflow:hidden;t
ext-overflow:ellipsis}.va_tt .slide .mc_vtvc{width:100%}.va_tt .slide video{object-fit:cover}.va_tt
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.mc_vtvc_th .cico{width:100%;height:204px}.va_tt .b_overlay
.btn.bigrounded{top:auto;bottom:0;margin-bottom:93px}.va_tt .vt_onhv
.mc_vtvc_htb{padding-top:86px}.va_tt .vsb_tr_chd .mc_vtvc .vtmu,.va_tt .vsb_tr_chd .mc_vtvc
.vtpl{bottom:6px}.va_tt .vcmt_ct,.va_tt .vcmt_ctt{display:block;margin-bottom:4px;font-size:11px}.va_tt
.vasyt::before{content:"";background:url(
AAAYCAYAAADgdz34AAABRklEQVR4Ae2UT0rDQBJFX7QICtaoIOimAReiUNuV696jmx5A8AalZ/AIp
bdwIT2B6wqlWYkuWgnBP7jo+D7SkcmiM4kd6KYPfjNDeHlfJt8kwEYOBXqhgENOd+SGnJKQ7JFjsr3k/j
mZkg/yQn7IE7lncAwjvElmRHlCskKzQMduOZWsrcWNS7hX+dmgQurNQzxD52YBQ6s1maTb3UCtNsoo
TOzwI7THkXAYAD0+9narVyTR9aGtVoqpyRRqtdzNXls7qCCMqpWgXodqNVsrrkZ/ImiimMe6g4wHLqci
Qx6BzOXGwn93S7QaBQJF6Uy6B28Wq3y1HKSZC6uL7PAG1wFymask35FY/jX899Kfkxk6vE/JfIRrhvw
XJEH8r5C8Iw8kmudGyzbH037nI6Q9UnWu8i+eDnf38iamC7saVDkJG60Fv0CnB4IzftPhuMAAAAASUVO
RK5CYII=) no-repeat;background-size:18px 18px;padding-right:22px}.va_tt
.vasig::before{content:"";background:url(
AAAYCAYAAADgdz34AAAEsUUEQVR4Ad1UTWxUVRT+zn3vzbz5ozNtFQpRa2hDjC6qhKWICwjWTV
mwMRKIMSG44W9hXIGRRKPRUMMCEySgidHEXFXjxkgJEU0ISEhEaItg0bZU7bTz99689+49nvem5SfT
hVt5yc3ce+ee7zvfd869wP/9o/sXm4bKxUaAfQ6bnVKT9GZNIawiuDpCmiM4MLDZwAKDmJNgJoKWGZ
O6ZzhPK0RHj44+O99GsGltuRhkzJkshwMF00ROwHM6hKzhCnjaREjFBCYmMHcDWYYmJSQKgbIQgi
7XlPXiEom9RKBcf1+X1gMF3USBZQjBk2sdPLY2h+6VTgJqSdYqybyVfWPGw9x4FeWxKiIhCY0FH9ZA
l7L2yt9vP0BQ0s2dHZJ5hxB05zReObIWvQMF/Jdv+uwMrrzMXo1g4BsNI29q42gK/J6SzGB8bH9zf4E/PqJ
MUyN/A79ZxVpMSHFwGKMmGGSguTXlZBbvxi9BzYgm1+PK3vOJgQe7N4l3HsEuoFOIYht6Xu+E79+
dAXTX40t1iCQodkRI2yxR6xiEpNWfjBEsVmVTy6iY/d6rO5zURmvwCcHbQTdKnJe3i875FkHV6c5G4uI0
dNyva46Dz0EqX6u0GFNPzRG1T78HsQxUqAYOQXQAg6+/NsJ90h34TcRlASBUUWFatWJev0xDjlqcaZn
gKXPt9Bcb/4IxeK7wipjU+j84sdKL96AnqqKhrsGJCcNVlKi9oUaWojKKIuo4IMecm6k6bZogj5A9ulazVU3j
jGPFNGbI7/5RkqfnYQKw4NorLnU6lGC4YohFK+nLlnkVqarOB5dOAvuKgla8dakMNVyfYZBOcuAbOTI
FWDsuqEO7e5+e2PsPt7BLQORY0WgVxKkjkTvmAgg6a4xLNwqVqIk/AiKSXJMAxJnVEghRIJfXoniPC
hmQ1ZBNp+W5KCDlgYzmdgVqlgpqWkL91h8xoGRrbkwgNfgCrNU52RRS2YvnzsbNEJ67kGQvWbeSEkt
VHE9+ew3y4nlKIYIU0NrISibSj/6x9yk7fByZj98lff68KBD7tmxJjSPHU8sAaUWUUBPFaK22uQTf9DlPf
YLEy1NtZ1SaVD6PAP1A+9Dj09BmfbNjhbN0NPjqOxfzfz/G0my2Onf1WCyDMzYlFzeQVWscHsGtJz15N
1astmNL87Gbcna32bGqffAk5KbCQ5BdKzTYvEV8CXi7fhqSTG3BiXA02i+x7puwRcikgIoOtXObp5idKDr
4HVAsLJi8SzY5y8yyHYhLGLCuzLk9GzBqkNg0hv34noh5/YTFwnljdOdzmC8JY8/E+YDFN95CByLx+Gu
3U/XC24PK/yRddvQx/+D2pWSRvdyhg1s12gg59Chl9mDKW1MzAO3cE1rWvobr6oHKPin4N8QocCUAk
T0RIbGZnoCd+I3NN8IwicqRdTSQqotNtBMgFw6qQH1JufoDcrNz7tPRzBfz3JehZI8BifODDeHUZNXAjJF
RtUNVipGyilNiWkmse6MvGjoaxnNTyN0NFV7172S3sstxML9nxBRL7I00c+my8BhmvwqZRJV0vMKoSt
CDgQsQV+xbNq1OmYoZLo6PzeGi+fwFJbz1IhJBeawAAAABJRU5ErkJggg==)
no-repeat;background-size:18px 18px;padding-right:22px}.va_tt
.vastt::before{content:"";background:url(
AAAMCAYAAABWdVznAAAA90IEQVR4AZWQu2sCQRDGJyYHCQdqPEKqShr7NOZFyvQJiJ1YKYII
1irY+ieoiKXYKZaniI3WlOqg4AMfhaAcCMJ93q2vwxODZ6WnZnf7swQE0U0w6D1Wn7y4cOJO/sLL8c
H8ps1ernCdYCueCoJm03iAyaLGWa3SztDFg028BoBvnfdw4IW+r+hTgtLVUX67ZcBcjCKV0HEL/h0epT2c
gT8lBAlYjt+KNNsHMLU3yhUUebH+xGwWx+JRjOKdutUk+53wZVCPLGvnj/f2ZCFchXh6RjDwYS1dnF
LHo8XvZIMNVuE7PyD1SScATcHyqhuNevQt8H62BZHiaf6ZtXqegAAAABJRU5ErkJggg==)}
```

```

no-repeat;background-size:contain;padding-right:20px}.va_tt
.vasfb::before{content:"";background:url(/rp/zvtkyPveEhrXqHA-euzAa983fpQ.png)
no-repeat;background-size:contain;padding-right:20px}.vcmt_ckt.vasyt::before{background-size:15px
15px;padding-right:19px}.vcmt_ckt.vasig::before{background-size:15px
15px;padding-right:19px}.vcmt_ckt.vastt::before{background-size:contain;padding-right:17px}.vcmt_ckt.vasf
b::before{padding-right:17px}.mm_vrc{padding:24px 32px}@media screen and
(max-width:1022px){.mm_vrc{margin:0}}@media screen and
(max-width:766px){.mm_vrc{margin:0}}.mm_vrcc{padding:0 0 32px 0;margin-bottom:0}.mm_vrcc
h2{padding-bottom:20px}.mm_vrcc h2 a{font-family:"Segoe
UI",Arial,Helvetica;font-size:20px;color:#000;line-height:18px}.mm_vrcc .b_overlay
.btn{z-index:3}.mm_vrcc .vrhc{z-index:2}.mm_vrcc .mc_vtvc_th .cico{padding-bottom:0}#dg_c
.mm_vrc,#dg_c .mm_vrcc{padding:8px 16px 0 16px}#dg_c .mm_vrcc .mc_vtvc{width:100%}#dg_c
.mm_vrcc a:hover{text-decoration:underline}.isvctrl .mm_vrcc
.slide{overflow:visible}.mm_vrc{padding:16px 100px 0 160px}.mm_vrc .b_overlay
.btn.bigrounded.next{right:-44px}.mm_vrc .b_overlay .btn.bigrounded.prev{left:-44px}.mm_vrc .b_overlay
.btn.bigrounded .cr>div,.mm_vrc .b_overlay .btn.bigrounded
.cr>div:hover{box-shadow:none;border-radius:0;margin:0;background-position:16px
9px;background-size:12px
22px;background-color:transparent;background-image:url(/rp/rKVnxf6wkbxI0DBa2Au3IVC5Sog.svg)}.mm_
vrc .b_overlay .btn.bigrounded .cr>div{opacity:.7}.mm_vrc .b_overlay .btn.bigrounded
.cr>div:hover{opacity:1}.mm_vrc h2
a{font-family:"Arial",Helvetica,Sans-Serif;font-style:normal;font-weight:500;color:#111}.mm_vrc
h2{display:inline-block;padding-bottom:16px}.mm_vrc>div{position:relative;padding-bottom:32px}.mm_vrc
.see_more{position:absolute;right:0;top:3px}.mm_vrc
.see_more>a{font-family:"Arial",Helvetica,Sans-Serif;font-style:normal;font-weight:normal;font-size:16px;li
ne-height:18px;color:#000}#vsb_more{padding:16px 0 4px 160px;color:#111}#vsb_vid_cat .mm_vrc h2
a::after{display:inline-block;margin-left:12px;content:"";background-image:url(/rp/rKVnxf6wkbxI0DBa2Au3
IVC5Sog.svg);background-size:7px 14px;width:7px;height:14px;opacity:.7}#vsb_vid_cat .mm_vrc h2
a:hover::after{opacity:1}.mm_vrc .mm_vrc_sub{display:inline-block;margin-left:24px}.mm_vrc
.b_hList{position:absolute;height:20px;top:3px;overflow:hidden}.mm_vrc
.b_hList>li{padding-right:24px;padding-bottom:0}.mm_vrc .b_hList a{font:normal 13px/20px
"Arial",Helvetica,Sans-Serif;color:#111}.mm_vrc .mc_vtvc_tot .mmsts
.mc_vtvc_meta{display:none}.vsb_tr_chd .mc_vtvc .mc_vtvc_meta { padding: 10px 10px 10px 10px; }
.vsb_tr_chd .mc_vtvc .mc_vtvc_meta_w { height: 190px; margin-top: -0px; } .vsb_tr_chd .mc_vtvc
.mc_vtvc_title { height: 150px; line-height: 15px; margin-bottom: 0px; margin-top: 0px; } .vsb_tr_chd
.mc_vtvc .mc_vtvc_meta_block_area { height: 20px; } .vsb_tr_chd .mc_vtvc .vtmu, .vsb_tr_chd .mc_vtvc
.vtpl { bottom: 198px; } .vsb_tr_chd .mc_vtvc_th_dock { height: 190px; } .vsb_tr_chd .mc_vtvc_th_dock {
height: 60px; } .tr_bt .mc_vtvc_th
img{height:auto;width:100%}.grad_b{position:absolute;width:100%;top:30%;bottom:0%;background:linear-
gradient(180deg,rgba(48,44,39,0) 0%,#302c27 100%)}
100%)).mc_vtvc_th_dock{width:100%;background:#302c27}.mc_vtvc_tot

```



```

.mc_vtvc_th{background-color:transparent}.vsadc .grad_b{top:81.8%}.mc_vtvc_tot
.mc_vtvc_meta{line-height:15px;position:absolute;bottom:0%;background:transparent}.mc_vtvc_tot
.mc_vtvc_meta_row{line-height:16px;font-size:12px;height:16px}.mc_vtvc_tot
.mc_vtvc_meta_row,.mc_vtvc_tot .mc_vtvc_meta_row a{color:#dadada}.mc_vtvc_tot
.mc_vtvc_title,.mc_vtvc_tot .mc_vtvc_title a{color:#fff}.vsadc .mc_vtvc_tot
.mc_vtvc_title{line-height:18px}.vsadc .mc_vtvc_tot .mc_vtvc_meta_row,.vsadc .mc_vtvc_tot
.mc_vtvc_meta_row a{color:rgba(255,255,255,.7)}.vsadc
.mc_vtvc_meta_pubdate{padding-bottom:2px}.vtdc_default{background:#302c27}.vtdc_default_g{backgrou
nd:linear-gradient(180deg,rgba(48,2,39,0) 0%,#302c27
100%)).vtdc_black{background:#111}.vtdc_black_g{background:linear-gradient(180deg,rgba(17,17,17,0)
0%,#111
100%)).vtdc_blue{background:#3a4e74}.vtdc_blue_g{background:linear-gradient(180deg,rgba(58,78,116,0)
0%,#3a4e74
100%)).vtdc_brown{background:#69423d}.vtdc_brown_g{background:linear-gradient(180deg,rgba(105,66,6
1,0) 0%,#69423d
100%)).vtdc_grey{background:#464646}.vtdc_grey_g{background:linear-gradient(180deg,rgba(70,70,70,0)
0%,#464646
100%)).vtdc_green{background:#324f32}.vtdc_green_g{background:linear-gradient(180deg,rgba(50,79,50,0
) 0%,#324f32
100%)).vtdc_orange{background:#8c5400}.vtdc_orange_g{background:linear-gradient(180deg,rgba(140,84,
0,0) 0%,#8c5400
100%)).vtdc_pink{background:#a3394b}.vtdc_pink_g{background:linear-gradient(180deg,rgba(163,57,75,0)
0%,#a3394b
100%)).vtdc_purple{background:#774077}.vtdc_purple_g{background:linear-gradient(180deg,rgba(119,64,1
19,0) 0%,#774077
100%)).vtdc_red{background:#811515}.vtdc_red_g{background:linear-gradient(180deg,rgba(129,21,21,0)
0%,#811515
100%)).vtdc_white{background:#464646}.vtdc_white_g{background:linear-gradient(180deg,rgba(70,70,70,0
) 0%,#464646
100%)).vtdc_yellow{background:#755b00}.vtdc_yellow_g{background:linear-gradient(180deg,rgba(117,91,
0,0) 0%,#755b00
100%)).vtdc_teal{background:#256868}.vtdc_teal_g{background:linear-gradient(180deg,rgba(37,104,104,0)
0%,#256868
100%)).cipr,.cipg,.cipa,.cipr,.ciptr,.cipr{display:inline-block}.cipa,.cipr,.cipr{cursor:pointer}.vab{vertical-ali
gn:bottom}.vam{vertical-align:middle}.vat{vertical-align:top}.vabl{vertical-align:baseline}.vatt{vertical-alig
n:text-top;border-radius:0}.vatb{vertical-align:text-bottom} evronDown12,
evronUp12{background:url(/rp/QKlTrqL25sGDqfRYQjkMWJWDeG8.png)
no-repeat;background-size:494px 58px;width:12px;height:12px} evronDown12{background-position:-372px
0} evronUp12{background-position:-372px -14px}@media(prefers-color-scheme:dark){#bpage.b_med
evronDown12{background-position:-386px 0}#bpage.b_med evronUp12{background-position:-386px
-14px}}#bpage.b_drk evronDown12{background-position:-386px 0}#bpage.b_drk

```


evronUp12{background-position:-386px -14px}.cipt,.cipl{margin-right:10px}.cipt .cico,.cipl .cico,.ciptr .cico,.ciplr

.cico{border-radius:0}.b_action>.cipt,.b_action>.cipl{float:left}.ciptr,.ciplr{margin-left:10px}.sw_play{height:16px;width:16px}:not(.dc_aud_wrp)>.sw_play{background-image:url( E6QAFKUAEqYAD58AE6QAE6UAFKQAEqUAD6QAE6MAE6QAD6cAE6QAFaQAFKQAEqQAFKUA E6QAFKUAEqIAFKMAE6MAE6MAD58AE6UAE6UAE6IAFKYAFKYAE6MaDJ//AAAAI3RSTlMAEG Cfz+//XyCQj79vMEDfIKAwOK/vYL9gcHDPMM9QkK+fzHYYSkAAAEVSURBVHgBdZMFkuwwEEPv k/ULx8nSMN7/jh/X1dUDKgjpyaTIZavqLUF6q2rTo5o24aoaRVkH9MNokk1DD3QW8AzV7M/zAtLDNGby qKA5k9+d58OkKPukZFjmU0/0Qf6PdeXGVcDu3wBQphcXpxH+vlioyhtyHRwLrWQeICCEzHyZvunlBmLI mo0WtsEQQnZU2jMFQwg5cFTCgiGEGF8CBUMMGReGdCpvnG/xaT7Ennc3RFyaOMZlOu7LXLf2Q8GL 1tSyROMGx3/O0aSzH1bEyznOUKYZcC/C+XVh2nJT6Yk+yd7giz3wV/LstS8NfvgTPCN0qVkofAk8A+th MsnehzXQmqLmBVdqHXfZ97JPkPa3ldP6DeOGDIAP873EAAAAAEIftkSuQmCC);background-size:16px 16px}#slideexp1_632BEA .slide { width: 94px; margin-right: 20px; }#slideexp1_632BEA .b_slidebar .slide { border-radius: 6px; }#slideexp1_632BEA .slide:last-child { margin-right: 1px; }.b_sldr .slide{box-shadow:0 0 0 1px rgba(0,0,0,.05)}.b_cards .cico,.b_slidebar .slide .cico{border-radius:0}#b_content .b_wpt_container .l_ecrd_imgsetgrid.l_ecrd_imgsetgrid_actionlink .l_ecrd_imgsetgrid_item .cico{border-radius:0!important}.b_sldr .slide.see_more{box-shadow:0 0 0 0 rgba(0,0,0,0)}.b_sldr .slide.see_more .carousel_seemore{border:0}.b_sldr .slide.see_more: hover{box-shadow:0 0 0 0 rgba(0,0,0,0)}#slideexp1_632BEA { margin: -4px; } #slideexp1_632BEA .b_viewport { padding: 4px 1px 4px 1px; margin: 0 3px; }#slideexp1_632BEA .b_slidebar .slide[data-mini="1"] { display:none; }Videos of Photovoltaic Panel Installation DetailsWatch video0:15Complete Solar Panel Installation | Step-by-Step Guide for Home Coding Electronics1.1K views8 months agoWatch video on todayshomeowner Complete Solar Panel Installation Guide - Today's Homeownertodayshomeowner Nov 15, 2024Watch video32:49Guide to install solar panels. Step by step. SolarEngineering5.9K viewsSep 14, 2024Watch full videoShort videosphotovoltaic panel installation details00:15 00:34 00:04 00:21 00:20TikTok00:15 See allWatch full video.b_imgcap_altitle p strong,.b_imgcap_altitle .b_factrow strong{color:#767676}#b_results .b_imgcap_altitle{line-height:22px}.b_imgcap_altitle{display:flex;flex-direction:row-reverse;gap:var(--mai-smtc-padding-card-default)}.b_imgcap_altitle .b_imgcap_img{flex-shrink:0;display:flex;flex-direction:column}.b_imgcap_altitle .b_imgcap_main{min-width:0;flex:1}.b_imgcap_altitle .b_imgcap_img>div,.b_imgcap_altitle .b_imgcap_img a{display:flex}.b_imgcap_altitle .b_imgcap_img img{border-radius:var(--mai-smtc-corner-card-default)}.b_hList img{display:block}.b_imagePair ner img{display:block;border-radius:6px}.b_algo .vttv2 img{border-radius:0}.b_hList .cico{margin-bottom:10px}.b_title .b_imagePair> ner,.b_vList>li>.b_imagePair> ner,.b_hList .b_imagePair> ner,.b_vPanel>div>.b_imagePair> ner,.b_gridList .b_imagePair> ner,.b_caption .b_imagePair> ner,.b_imagePair> ner>.b_footnote,.b_poleContent .b_imagePair> ner{padding-bottom:0}.b_imagePair> ner{padding-bottom:10px;float:left}.b_imagePair.reverse> ner{float:right}.b_imagePair .b_imagePair:last-child:after{clear:none}.b_algo .b_title .b_imagePair{display:block}.b_imagePair.b_cTxtWithImg>*{vertical-align:middle;display:inline-block}.b_i

```

magePair.b_cTxtWithImg>
ner{float:none;padding-right:10px}.b_imagePair.square_s>
ner{width:50px}.b_imagePair.square_s{padding-left:60px}.b_imagePair.square_s>
ner{margin:2px 0 0 -60px}.b_imagePair.square_s.reverse{padding-left:0;padding-right:60px}.b_imagePair.square_s.reverse>
ner{margin:2px -60px 0 0}.b_ci_image_overlay:hover{cursor:pointer}
sightsOverlay,#OverlayIFrame.b_mcOverlay
sightsOverlay{position:fixed;top:5%;left:5%;bottom:5%;right:5%;width:90%;height:90%;border:0;border-rad
ius:15px;margin:0;padding:0;overflow:hidden;z-index:9;display:none}#OverlayMask,#OverlayMask.b_mcOv
erlay{z-index:8;background-color:#000;opacity:.6;position:fixed;top:0;left:0;width:100%;height:100%}Fluke
CorporationA Guide to Photovoltaic Systems Installation: From ...This article walks you through the basics of
PV system installation, focusing on the practical steps from mounting modules to connecting the inverter ...

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Before we get into the nitty-gritty of how to install solar panels on your rooftop, balcony, or grounds of your property, it's crucial to understand that photovoltaic modules (PV) -- like solar ...

In this step-by-step guide, we'll walk you through everything you need to know about solar PV system installation--from the initial consultation to the moment your system is up and running.

Builders that intend to meet both the solar PV and solar water heating RERH specifications should detail the location and the square footage of the roof area to accommodate both technologies.

Complete solar panel installation guide: step-by-step process, real costs, permits & incentives. Calculate your solar potential with PVGIS tools. Free resources included.

This article walks you through the basics of PV system installation, focusing on the practical steps from mounting modules to connecting the inverter to the electrical grid, and emphasizes the importance of ...

In this guide, we will take you through a detailed step-by-step process of installing solar panels at home, from planning to powering up your solar system. 1. Analyze Your Electricity Bill: ...

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